DOCTOR OF PHILOSOPHY

Individual and Work Environment Factors that Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

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Declaration

I, Alya Alghamdi, declare that I am the sole author of this thesis; that all references cited have been consulted. I have carried out the work of which the thesis is a record, and this thesis has not been previously accepted for any other higher degree submission.

Signature: Date 24 May 2021

Alya Alghamdi

All conditions stated within the Ordinance and Regulations of the University of Dundee have been strictly adhered to and fulfilled by the candidate, Alya Alghamdi.

Supervisor ‘s Signature: Date 24 May 2021

Dr. Janice Rattray

Abstract

Background

Saudi Arabian higher education institutions are facing major problems in retaining nursing faculty members. The reasons for this are unclear and there is limited literature specific to the Middle East and Saudi Arabia.

Methods/Design

This current study adopted a mixed methods approach (sequential, explanatory) to understand the factors that contribute to the retention of nursing staff in higher education institutions in Saudi Arabia. This research was carried out in four phases–two scoping and a systematic review (in phase one); followed by pilot work (phase two); a cross-sectional study (phase three) and finally focus groups (phase four). Participants for the cross-sectional study were recruited from five governmental colleges of nursing and from two of these colleges for the focus groups. The participants were academic nursing faculty staff.

Results and Findings

The reviews identified a range of personal and work-based factors and the Job Demand-Resources model as a potential theoretical model. Pilot study results informed the cross-sectional study by testing recruitment strategies, and the applicability of questionnaires in the Saudi context. A range of standardised questionnaires representing key concepts of the JD-R model were used. Univariate analyses identified a range of between group differences with men having less burnout, and higher job satisfaction, Saudi nationals had poorer stress outcomes and were less engaged than non-Saudis, and older participants and those with longer experience in academia had better stress outcomes and were more engaged. Multivariate analyses demonstrated that job demands, and female gender predicted stress outcomes and job and personal resources predicted work engagement and commitment. The focus groups highlighted that the role of culture, gender and nationality are important in dealing with work stress and factors related to intention to remain.

Conclusion

The study highlights the importance of resources and the motivational arm of the JD-R model in predicting intention to remain. The influence of job demands is important but less so than that of resources. Recommendations therefore focus mainly on the provision of resources for the individual, work environment and organisation with some attention given to promoting a manageable workload, and role clarity.

Abbreviations

CINAHL	Cumulative Index to Nursing and Allied Health Literature
CFA	Confirmatory Factor Analysis
CY	Cynicism
EI	Emotional Intelligence
EO	Emotional Outcomes
EX	Emotional Exhaustion
GSE	Generalised Self Efficacy
HE	Higher Education
IRB	Institutional Review Board
ITR	Intention to Remain
JBI	Joanna Briggs Institute
JD	Job Demand
JDI	The Job Descriptive Index
JD-R	Job Demands Resources Model
JR	Job Resources
JS	Job Satisfaction
KSA	Kingdom of Saudi Arabia
KSU	King Saud University
MBI	The Maslach Burnout Inventory
MESH	Medical Subject Headings
MLR	Multiple Linear Regressions
OO	Organisational Outcome
PE	Professional Efficacy
PICO	Population, Intervention, Comparator, Outcome
PIS	Participant's information Sheet
PO	Personal Outcome
PR	Personal Resources
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
QAS	Standardised Question Appraisal System
QATSDD	Quality Appraisal Tool for Studies with Diverse Designs
QEEW2	Questionnaire on the Experience and Evaluation of Work
RQs	Research Questions
RQ	Research Question
SO	Stress Outcome
SPSS	Statistical Package for the Social Sciences
SSEIT	Schutte Self-Report Emotional Intelligence Test
TEI	Trait Emotional Intelligence
TEIQue-SF	Trait Emotional Intelligence Questionnaire- Short Form
UK	United Kingdom
UOD	University of Dundee
UREC	University Research Ethical Committee
USA	United States of America

UWES	Utrecht Work Engagement Scale
WE	Work Engagement
WEMWBS	Warwick-Edinburgh Mental Well-being Scale

Chapter One – Introduction

1.1 Introduction and Overview of the Culture, Religious Background in Saudi Arabia

The Kingdom of Saudi Arabia is one of the largest countries in the Middle East, ruled by an absolute monarch and has the Islamic religion as the cornerstone of its social and cultural developments. Overall, Islamic beliefs and values provide a constant foundation and background for Saudi society including careers, education, health care and social and family life (Al-Shahri, 2002). The last decade has seen significant cultural and societal changes that have been guided by a 2030 Vision, and this has resulted in rapid transformation of Saudi Arabia across all areas of life including higher education. Over the years, the economic, industrial, education, health development of Saudi Arabia has offered many specialist professions for Saudi and non-Saudi individuals (Alsufyani, 2020). The Saudi government offers consistent support for educational resources and the improvement of the provision of higher education with totally free education and health care for all citizens regardless of nationality across the all the regions of Saudi Arabia (AlDossary, 2020).

The role of women within the Middle and Saudi Arabia is greatly influenced by Islamic religious beliefs, and gender issues can be a significant problem. Until recently, in Saudi Arabia, career opportunities for women were very limited, and career advancement hindered. Moreover, there were a number of restrictions placed upon women who had limited rights to travel, had to dress in public in a specific way, and could not drive a car. In addition, the guardianship system where a woman could not travel out with the Kingdom without being accompanied by and have permission from a male guardian was in existence. Women in employment, highlighted the burden of accumulated stressors at both home and in work, excessive workload without consideration of the mother roles, wife role and home duties (Al Asfour, 2017). They struggled also in balancing the family-work life due to the challenges related to pregnancy and responsibilities of raising the children. All these challenges drive women to be easily stressed and exhausted and that may impact on their desire to stay in their work.

However, this last decade has seen immense change and many of these restrictions have not only been removed but Saudi Arabia now emphasises gender equality rather than gender

discrimination. The role of women in society and the workplace has changed significantly with the availability of many more career opportunities. This has brought different challenges and whilst there has been limited consideration of careers for women, in other areas of the Middle East, there has been nothing specifically related to Saudi Arabia. Enhancing understanding of the workplace and employment challenges, and the work barriers women face in Saudi Arabia could improve the work experience and career opportunities of Saudi women and develop interventions to overcome these barriers (Al-Asfour et al., 2017). This premise is highlighted in the Saudi 2030 vision. Thus, Saudi Arabia is committed to offer the necessary resources to overcome the challenges and barriers to improve the working environment for women.

1.2 Saudi Arabia 2030 Vision and Nursing Education

The Saudi Vision 2030 identifies a series of proposed developments in the fields of health delivery, nursing, education, communications, science, and technology (Al-Dossary, 2018). Saudi higher education institutions have a goal that includes that at least five universities will be in the top 200 in the world rankings (Al-Dossary, 2018). Nurse Education is delivered mainly within Colleges of Nursing in the Governmental controlled Higher Education System, although there are a number of private institutions who deliver this. Nurses are educated to honours degree level with all teaching being delivered in English. Most Universities also offer master's level programmes and more recently, doctoral studies have been introduced.

Saudi Arabia is undergoing rapid transformations in line with its Vision 2030 (Saudi Arabia, 2016). Its population is expected to rise to 34.8 million by 2025 and 54.7 million by 2050 consisting of both young and ageing populations. However, Saudi Arabia has a low/average number of nurses per 10000 population compared to many other countries, as shown in Figure 1.1 of Alluhidan et al. (2020).

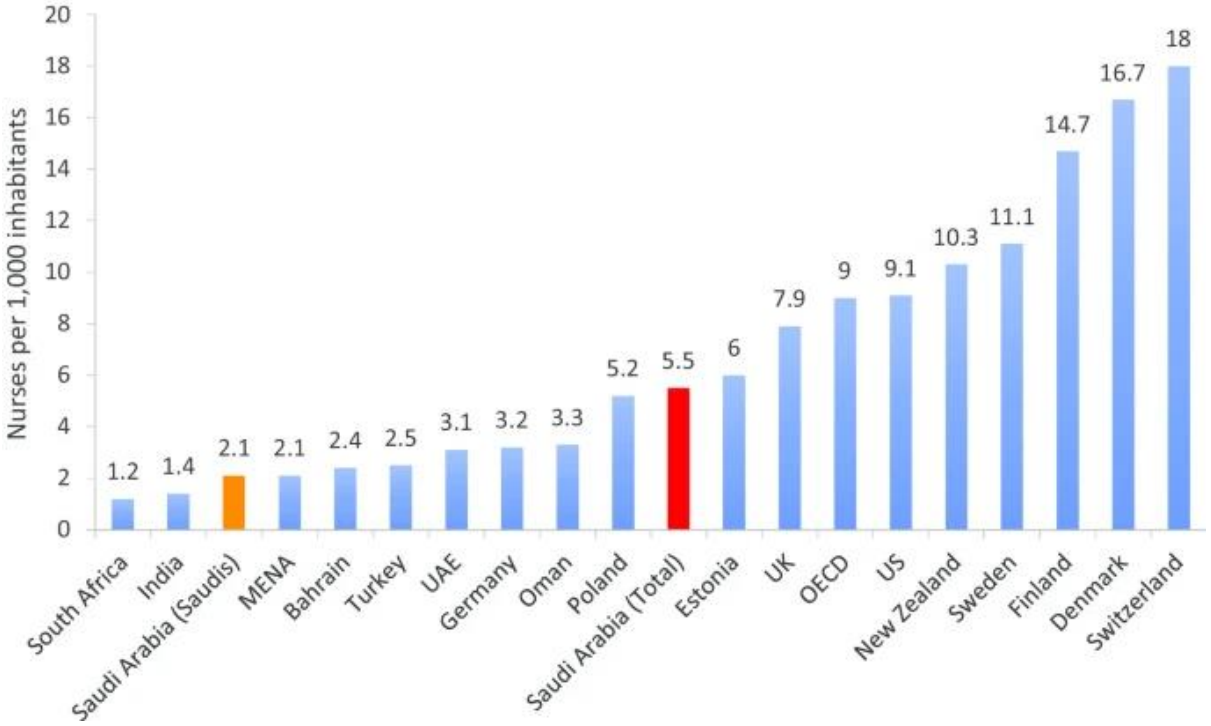


Figure 1.1: Nurses per 10000 population for the latest year reported by countries, for Saudi Arabia, the data is for 2018 (Alluhidan et al.,2020).

Nursing graduation among Saudi citizens is one of the lowest in the world, at 11 per 1,000,000 population (Alluhidan et al., 2020). According to the Ministry of Education statistics in 2017, there are 39 governmental nursing colleges (around 17,085 BSN students) in Saudi Arabia, and 13 private colleges. Female students (76%, n = 13,001) are the majority of BSN students in KSA. In addition to funding home based undergraduate and postgraduate nursing programmes, the Saudi government offers international scholarships for Saudi nationals to study nursing, about 813 Saudi nursing students are funded to study at different nursing colleges across the world, mostly the UK, USA and Australia. These scholarships contribute to the shortage of nursing faculty staff and are one suggested solution to solve the staffing challenges of nursing faculties (Aljohani, 2020).

Both Higher education and health care currently are under major development and transformation to respond to an increased population and economic development. Many of these improvements are driven from the 2030 Kingdom's Vision, which aspires to achieve a quality of health care through 'Caring for our Health', and education 'that contributes to economic growth', to achieve international accreditation standards (Kingdom of Saudi Arabia Vision 2030, 2016). In 2018, the Saudi government assigned a budget of $192 billion, for education and health care. This budget will provide funding to improve recruitment, enhance

the facilities and resources such as, increased number of qualified employees, and universities, to promote development of the health and education systems. Thus, to meet the increase necessary in the health care setting, there needs to be an increase in both the number of nurses and nursing faculty to meet the healthcare needs of the increased population (Kingdom of Saudi Arabia Vision 2030, 2016; National Transformation Program 2020, 2015).

In addition, the 2030 vision seeks to improve the culture and gender issues in higher education. However, this will be difficult. In terms of students' academic preparation, female faculty can only teach female students and for the male same with two separated campuses. Thus, nursing colleges have to provide two advanced simulation laboratories in each site of male and female (Aljohani, 2020), and recruit both male and female faculty.

According to the recommendations of the Saudi Vision 2030, there is a need also to enhance and advance the nursing higher education system with a focus on regulations and policies. There is a need to increase the facilities and improve the research evidenced based practice and encourage research-based teaching. Allied to this will be the importance of improving recruitment and a human resource system, that deals with international expertise in nursing education to facilitate exchange the of experiences and increase the numbers of qualified graduated nursing students to meet the need of the Saudi labour market in heath care centres and hospitals (Al-Dossary, 2018).

Even though the number of nursing colleges in Saudi Arabia has increased significantly in recent years (Alboliteeh et al. 2017), the nursing academic system still face challenges in the quality of the education, staff retention and recruitment, that consequently impacts on programme delivery. With the increased number of nursing students, this remains a significant problem. Therefore, it is realistic to anticipate that Saudi Arabia will continue to rely on non-Saudi staff.

The need for adequate number of nurses for effective and quality healthcare is recognised, and this emphasises the need for Colleges to be adequately staffed. As with many institutions and organisations across Saudi Arabia, Colleges of Nursing rely upon a significant number of non-Saudi staff. This has both benefits and disadvantages. Non-Saudi staff members tend to be very well qualified and experienced and often have experience from other Middle Eastern countries. Non-Saudi staff may also receive a good benefits package to relocate to the Kingdom and pay is often better than in their own country (Al-Rubaish & Wosornu, 2009).

However, some of the disadvantages include those students are being taught from a staff with a diversity of backgrounds representing different healthcare systems. Non-Saudi staff also have limited career opportunities with the more senior posts reserved for Saudi staff, they tend to be employed on fixed term contracts which limits their job security. Some of these non-Saudi staff stay for two years or less and the reasons for this are unknown.

As a consequence of this overreliance on non-Saudi staff, the 2030 vision aims also to improve Saudisation (increasing the employment of Saudi nationals) in education settings such as nursing colleges. Achieving that would reduce the dependence on the non-Saudi national and help develop a good nursing education system, with improved education standards for nursing degrees. By promoting Saudiasation, it is hoped that other benefits occur such as improving the qualification of nursing faculty staff and the resources, payment, and benefits to attract and retain Saudi staff in the Higher education institutions (Alsufyani, 2020). The current student capacity of nursing colleges has to increase to around 26,200 nursing graduates during 2019-2027. Therefore, to meet the suggested ratio of one nurse for every 200 Saudi population, Saudi Arabia must recruit 185,722 nurses who will increase the teaching demand and therefore the need to recruit good teaching staff. This is challenging in a current climate where faculty shortages exist. Therefore, establishing ways to enhance recruitment and retention is of increasing importance (Aljohani, 2020). It is important therefore for all universities to invest in improving recruitment strategies, benefits and facilities, and career opportunities to increase staff numbers, and improve retention. Nurse education therefore is aligned closely with and has to respond to changes in healthcare, and nurses and nursing within Saudi Arabia.

1.3 Nursing in Saudi Arabia

Nurses and nursing in Saudi Arabia have an increasing value within healthcare services. This is being accomplished by developing their profession through delivering services that reflect the needs of the Saudi community. Nurses offer the required care for those in need of healthcare or primary care across all ages of the population. Recently within Saudi Arabia, nurses' roles are changing to reflect the standards, and scope, of nursing care in other developed countries. No longer are they limited to providing direct patient care alone but have extended their roles to include helping patients in decision-making, encouraging patient and family engagement, providing continuity of care, enhancing interpersonal communication and professional relationships. These extended roles also result in reducing morbidity and

mortality, increasing patient satisfaction, increasing treatment compliance, improving productivity, and lowering healthcare costs. Thus, nursing is crucial to meeting the present healthcare demands in Saudi Arabia (Almutairi et al., 2020).

Traditionally, nursing was respected and valued in Islam; from the time when caring for the injured soldiers in previous Islamic wars was carried out by women. Despite this recognition through Islamic history, and in Saudi Arabia, nursing has not been viewed as a good profession in recent times. This may be because of difficulties balancing work and family life especially for married women. The low image of nursing especially for women is linked to culture and gender. Even though the Saudi nurse cares for the female patients only they are required to work with male staff and that is not culturally accepted. Furthermore, working night shifts is not accepted culturally for women. This bad image has led to family disagreements for family members to study nursing (AlYami& Watson, 2014). As a result, the Saudi health care system relies on recruiting nurses from different countries and this in turn creates barriers between the nurses and local patients because of the differences in language, culture, social values and religion (Al-Mahmoud et al., 2012).

Saudi Arabia therefore faces a shortage of nurses coupled with high turnover rates in the profession (Almalki, FitzGerald & Clark, 2011). A considerable proportion of nurses in the country are expatriate nurses while only 29.1% of the nursing workforce consists of Saudi nurses (Almalki, FitzGerald and Clark,2011). This is an even greater concern in private hospitals where Saudi nurses comprise only 4.1% of the total nursing workforce. Many of these expatriate nurses leave once they obtain sufficient work experience in a developed country. Hence, there is a need to identify measures that will promote retention in this profession so as to not only encourage nursing staff to continue in their roles but also support the Saudi staff. This is especially important given that the Saudi population is rapidly ageing, and this will put pressure on the country's medical facilities and resources in the coming years. While the government has taken measures to promote the Saudization of this profession, there are still considerable measures that must be taken in order to address the concerns faced by nurses (Alsufyani, 2020).

Lamadah and Sayed (2014) elaborate this further and state that some of the significant challenges facing the nursing profession in Saudi Arabia include poor working conditions which is evidenced by long working hours, an increased workload, low pay as well as a lack of financial incentives. They continue that a high turnover coupled with staffing shortages

constitute the ‘perfect recipe’ for making retention of nurses difficult. After assessing some of the policies and support systems pertinent to nurses, they found that concerns of ‘increased stress, low morale and lack of job satisfaction’ still persisted (Lamadah & Sayed, 2014:22). They found that an increase in nurse-job satisfaction, allows for a corresponding increase in the nurses’ intention to remain.

The Saudi government now faces significant challenges to attract and retain more Saudis in the nursing profession. One of the solutions is the Saudisation programme that aims to improve the image of nursing through developing programmes to assist Saudi nurses, developing a good Saudi nursing community, educating and reflecting the essential roles of nursing, providing developmental programmes and increasing the opportunities for Saudi nurses (Al-Hanawi et al., 2019). Recently, nursing education has improved with the Saudi universities increasing the number of bachelor’s degree of nursing, master’s programme and recently PhD programmes for both male and female nurses. The Kingdom of Saudi Arabia is transforming significantly by implementing a key programme of modernisation described in the Saudi Vision 2030. One of the aims of this programme is to improve all the systems and institutions, including the healthcare system, by improving effectiveness, with an emphasis on value-based healthcare (Alluhidan et al.,2020)

Over the years, a number of suggestions to improve the status of nursing have been proposed. Almalki, FitzGerald and Clark (2011) suggest certain measures that may address the concerns that the nursing profession faces. One of these is the reduction of their training from the current five years to that of three years, which is in keeping with the length of training in most developed countries. However this has not been implemented (Alijohani, 2020) and the traditional programme remains at four years with the fifth being an internship year. They also suggest that aspiring nurses should be provided with financial support over the course of their education and training. ‘Facilitating attractive work environments; reduction of workloads and non- nursing tasks; providing opportunities to pursue higher education studies, and continuing education programmes; allowing part-time work; and ensuring adequate and fair remuneration’ are some of their other suggestions and recommendations (Almalki, FitzGerald & Clark, 2011:309). Lastly, they urge for the establishment of a national nursing workforce planning strategy in order to address the challenges faced by nurses in the country. More recently, Lamadah and Sayed (2014) recommend the establishment of personnel policies in hospitals to address the dissatisfaction of staff while also providing them with opportunities for professional development and flexible scheduling. Some of these measures mentioned above

have been implemented in Saudi Arabia in the recent years such as developing programmes, enhancing the numbers of Saudi nurses by developing the Saudization programme, and improving the nursing higher education (Al-Hanawi et al., 2019). Alsubaie and Isouard (2019) indicated that increasing salaries is the most important factor to ensure retention of nurses in Saudi Arabia.

1.4 Nature and Contextualisation of the Study Problem

However, despite efforts, many nursing faculties staff members leave their jobs, thus creating staffing problems, that need to be highlighted and investigated. This is an international problem (Tourangeau et al., 2012: Tourangeau et al., 2014) and there appear to be a range of factors that influence the decision to remain or leave. These have been identified as; recruitment strategies, issues with the working environment (Lee et al., 2017), such as relationship with colleagues, and leadership from senior staff including Deans (Worthy et al., 2020). Other considerations include reducing demands and loads, establishing how an individual views a job in terms of role ambiguity (Gormley & Kennerly, 2011), how satisfied or dissatisfied an employee is, and organisational support such as adequate resources (Worthy et al., 2020). In addition, access to financial support from the organisation for education, or access to the required human resources and unionisation are also influential in the decision to remain or leave. Other factors include contractual issues such as full or part-time posts, lifestyle issues such as work-life balance and retirement system, and cultural reasons (Tourangeau et al., 2012; AlYami & Watson, 2014).

Even though most studies on nursing faculty intention to remain have been done internationally, mostly these have been in Western cultures particularly in USA and Canada. There have been limited studies in the Middle Eastern region, including Saudi Arabia. This is a significant gap in our understanding of these problems throughout the Middle East and emphasises the importance of this study. Intention to remain in Colleges of Nursing is a serious problem in Saudi Arabia that has consequences for the individual and organisation. Seeking the nature of the problem in the Saudi context and better understanding of the problem might help to identify the causes and suggest some recommendations to improve the academic environment.

1.5 Study and Thesis Structure

The aim of this study is to explore the individual and work environment factors influencing well-being, engagement, and intention to remain among Saudi nursing faculty. A four phase, mixed methods approach was used:

Phase 1 includes the review elements (both scoping reviews and the systematic review),

Phase 2 is the pilot work including two elements (cognitive testing and pilot testing),

Phase 3 is cross-sectional quantitative survey study with participation from five colleges of nursing and

Phase 4 is a 4 focus groups qualitative with participants from two of the five colleges of nursing.

Thesis Structure

This introductory chapter provided the background and nature for the study problem leading to justification of the research topic and its significance alongside highlighting the transformation of nursing education based on Saudi vision 2030. A brief outline of the four phases' aims has also been given.

The next chapter, Chapter Two, describes the two scoping reviews on emotional intelligence and job satisfaction. The two reviews examine the definition, conceptual and theoretical issues associated with emotional intelligence and job satisfaction in general as well as the related their measurements. Review questions guide these reviews, a clear search strategy is used to identify the relevant literature, and the discussion section discusses conceptual and theoretical factors and application of these concepts.

Chapter Three is a systematic review. In this chapter, the review questions guide this systematic review which following specific search strategies and appraises the quality of the reviewed studies. The emerged factors, predictors and organizational outcomes were identified; and their common theoretical frameworks, measures and the psychometric properties of the identified measures were presented. Conclusively, this systematic review informs the empirical work of this study, including the research questions.

Chapter Four is the methodology. This chapter focusses on the philosophy of the methodology, design, and integration process between quantitative and qualitative approaches followed by the theoretical framework of the study. The methods were discussed in each chapter under methods section and described that in detail for each phase.

Chapter Five is the pilot study. This chapter critically discusses the two elements of pilot test of cognitive and piloting test that tested the acceptability and practicality of measurements, recruitment techniques, analytical process as well as applicability of the JD-R model in a Saudi setting. Findings help to inform the main study.

Chapter Six is the main chapter of cross-sectional study. This chapter presents the cross-sectional study in detail that discusses the design, setting, participants, recruitment study and instruments characteristics, the statistical results of the correlation and regression between independent and dependent variables.

Chapter Seven is the qualitative chapter to help explain the cross-sectional survey results. This chapter presents the online focus groups, participant characteristics, settings, recruitment, generation of the open-ended questions, Braun & Clarke (2006) thematic analytic process, and discussed the findings.

Chapter Eight is the discussion chapter which collates and integrates the findings of the study. Finally, the conclusions and recommendations arising from the findings of this study are given alongside with strength and limitations of this research are also listed in this chapter.

1.6 Summary

Higher education institutions in Saudi Arabia struggle to retain their staff, which has been found to be the case in colleges of nursing as well. In order to fully address this and promote retention of staff, therefore, it is imperative to understand the drivers of why an individual intends to remain in a post. It is in this context that this research sought to understand these factors with regard to Saudi Arabia. The lack of research from the country makes this research pressing and pertinent. The study adopts a mixed method approach. Following the four phases of the research, the results are critically assessed, elaborated and discussed. This is followed by the recommendations that will be significant and relevant for the country as well as for other countries of a similar cultural and social context.

Chapter Two – Phase1: The Two Scoping Reviews

2.1 Introduction to Two Scoping Reviews

This chapter will present the findings from two scoping reviews. These were conducted to explore two initial concepts: Emotional Intelligence (EI) and Job Satisfaction (JS), that I had identified as potential key concepts related to the area of study. However, a secondary aim of the scoping reviews was to identify other key concepts related to the research topics.

I chose the two concepts of EI and JS for different reasons. I started my PhD with initial thoughts about the importance of emotional intelligence (EI) as a personal factor which could influence people in their work. As a lecturer in mental health, I was introduced to EI, and when considering the problem of staff recruitment and retention I was interested to explore whether it is an important factor in this area (Judeh, 2013). Moreover, EI appeared to be an important personal resource we can learn and use in our work areas to improve communication and to handle stress and workload (Alkurdi, 2015). It appeared that EI could help people to develop skills to solve work conflict, improve achievement and be more creative. However, EI was a new concept in Arab countries with limited the research in this area in their context (Kahtani 2013). EI was introduced to Middle East region through marketing of training packages under attractive names of happiness and success when Daniel Goleman's book of EI was translated into Arabic (Goleman, 2011; Al Kahtani 2013; Alghamdi, 2014). In the Saudi context these training and translated books were then used in institutions and education with the intention of improving outcomes in terms of communication skills, work relationships and staff retention, (Al Kahtani 2013; Alghamdi, 2014; Alkurdi, 2015). The researchers initially introduced EI in spite of the significant limitation that it had not been tested in the Arab context. EI was used without consideration that it has its roots in a western context and may or not be transferrable to a Saudi context (Goleman, 2011; Al Kahtani 2013; Alghamdi, 2014; Alkurdi, 2015). So, it was therefore important to understand this concept, explore its influence on work environment and staff retention, and importantly assess its relevance and utility within a Saudi context.

Job satisfaction was another concept that also seemed to be an important area. How satisfied an individual is with a job that might be related to their intention to remain. So, I was also thinking about how these two concepts may influence people to keep them at work.

Two scoping reviews about EI and JS were, therefore, conducted to enable me to gain a deeper understanding of these concepts (Levac et al., 2010). A scoping review was deemed to be one of the most appropriate approaches to give a deep understanding of these concepts and to potentially identify other key issues that might influence an individual's decision to remain in a current job (Arksey & O'Malley, 2005; Levac et al., 2010). Both scoping reviews aim to study the available literature and evidence to identify how the concepts are defined and measured, along with any underpinning theoretical frameworks and their importance in an individual's career.

2.1.1 Methods

Scoping reviews are a form of knowledge synthesis designed to summarize and synthesize evidence, rather than assess the quality of the studies (Arksey & O'Malley, 2005). The methodology used for these two scoping reviews was guided by the Joanna Briggs Institute (JBI) (2015) framework which is based on the earlier work of Arksey and O'Malley (2005) and Levac et al. (2010). This framework implements a rigorous and systematic process of mapping a research area following specific steps to enable replication and to strengthen the rigour of the research (Peters et al., 2015) (see Table 2.1).

2.1.2 JBI Guidelines

The JBI guidelines are one of the standard methods that will be applied in the two scoping reviews. The guidelines prescribed for this procedure are given in Peters et al. (2015).

Table 2.1: Scoping Review Guidelines of the JBI *(Peters et al., 2015)*

1	Developing Title, Objective/Aim, and Review Questions
2	Background
3	Inclusion Criteria
4	Search Strategies
5	Extracting Data
6	Presenting Results
7	Discussion, Conclusion and Review Gaps

2.2 Scoping Review One - Emotional Intelligence (EI)

2.2.1 Introduction and Background

2.2.1.1 Brief History of Research on Emotional Intelligence

This concept has developed over decades and was initially described by Thorndike (1930) as a social intelligence of the ability to deal with oneself and other people by understanding inner status, motives and behaviours. This evolved in the next decade through the work of David Wechsler (1973) and the idea that this was a non-cognitive intelligence essential for life effectiveness developed. Howard Gardner (1975-1983) then introduced the concept of 'multiple intelligences', emphasising the dual aspects of interpersonal and intrapersonal intelligence. By the 1990's EI was understood to be about understanding and managing one's own and others' emotions which in turn could influence thoughts and actions (Salovey & Mayer, 1990). For Salovey and Mayer (1990), the behavioural element makes EI distinct. Bar-On (2006) developed this work further and described emotional intelligence as non-cognitive competencies and skills that influence individuals' ability to cope with and manage the surrounding demands. The work of Bar-On and Salovey & Mayer (1990) was crucial as it allowed for clearer thinking on EI and paved the way for understanding how EI can influence behaviour.

Operationalising EI in order to link it with management and leadership development followed, with EI described as a personality trait to predict performance (Blackmore ,2011). In addition to this, there was an understanding that lacking skills to manage emotions were important factors in understanding unhappiness and dissatisfaction of the employee. It became increasingly evident, that EI and other factors such as teamwork and trust were considered as crucial aspects for employee retention (Pena-Sarrionandia et al.,2015).

Early research in psychology addressed only the non-emotional elements of intelligence and used these to formulate a measure of an individual's intelligence, i.e., Intelligence Quotient (IQ) (Wechsler, 1973). These elements included memory and recall, thinking and reasoning, cognisance and intuition, as well as problem-solving abilities. However, this overlooked the emotional aspects of intelligence. According to Landy (2005), Thorndike (1931) was the first to think about the concept of multiple intelligences, and to distinguish academic from social intelligence. He described social intelligence as the ability to comprehend and deal with others, which includes a cognitive and behavioural element. Subsequently, it took about half a century

for Gardner (1983) to re-address Thorndike's theory on multiple intelligences and to underscore the importance of intrapersonal and interpersonal intelligence in comparison to academic intelligence (IQ).

In addition, Wechsler (1943) introduced the possibility of "non-cognitive" or "non-intellective" components of intelligence, such as social skills and behaviours that differentiate between the persons who act intelligently in life situations and those who do not. This addressed the question of why not all those people who have high IQs are the best achievers in life. This means that factors such as how one controls their expression of emotions (Barsade & Gibson, 1998), the recognition of others' emotions, the management of one's own feelings, and dealing with stress (Lusch & Serpkenci, 1990) may be such indicators.

Mental ability is inadequate to explain the variations of the meaning of intelligence; the role of emotional processing abilities is important. These abilities include how to perceive, understand, use and manage emotions of oneself or others. There is variation in how a person uses their emotions to adapt to different contexts such as family life, social situations, or the workplace (Mayer, Salovey & Caruso, 2000). It was recognised that a distinct type of human mental ability was required to facilitate these adaptations to different contexts and thus the term 'emotional intelligence' (EI) emerged (Cherniss, 2010).

Increased focus on EI has demonstrated the association with progress and achievement in different aspects of life. Career success appears to be more associated with EI than general intelligence (Goleman, 2004) and this is also the case for effective leadership. In the latter, EI is associated with understanding, respecting, trusting, and getting along with followers or subordinates (Cherniss, 2000; Goleman, 1995; Richardson & Evans, 1997; Finegan, 1998; Quotinf, 2000; Dehshiri, 2004). The recognition of EI as an important element of human behaviour and the outcomes, specifically in the work area, is relatively recent and started only towards the end of the 20th century (Salovey, Mayer & Goleman, 2000). A scoping review is, therefore, ideal to map out what is known about EI.

2.2.1.2 The Joanna Briggs Institute Guidelines (JBI) Framework

JBI guidelines (Peters et al., 2015) for developing scoping review as a standard approach were followed, as prescribed in Table 2.1.

2.2.2 Objective / Aim

The aim of this review is to scope and map what is known about EI, including the theoretical background, measurement tools, and its influence on individual careers and organisation.

2.2.3 Scoping Review Questions

The questions this scoping review set out to answer were:

1) What are the main definitions of Emotional intelligence (EI)?

2) What theoretical frameworks underpin EI?

3) What tools are used to measure EI?

4) What is the importance and application of EI in terms of the individual and the organisation?

2.2.4 Method of Literature Search and Selection

2.2.4.1 Search Strategies

Inclusion and Exclusion Criteria

The inclusion criteria were based on empirical evidence around the definition, theories and tools used to measure EI, and the importance of EI for individuals and for organisations. Studies were included if participants were recruited from health care or educational organisations or included in any paper which used the EI and from a range of geographical locations. Reviews, qualitative and quantitative studies were included. All the published reviews, literature and research written in the English language were included. Only studies published between 1990 and 2016 were included. Exclusion criteria were also applied in tandem with inclusion criteria. This meant excluding research studies that were published in other languages as well as grey literature or unpublished works. In addition to this, since the focus of this review was EI, those that did not address this concept were excluded. These criteria are presented in detail below in Table 2.2

Table 2.2: Inclusion and Exclusion Criteria for the Selection of Papers

Criterion	Inclusion	Exclusion
Time	1990-2016	Studies outside these dates
Language	English	Non-English studies
Type of papers	Papers reporting on primary research and review articles	Papers that were not published. Papers that were editorials or discussions or personal opinion pieces.
Literature Focus	Papers where the overwhelming theme relates to the EI concept	Studies that do not cover EI concept
Population	Participants included in the papers that used and related to EI concept	Participants that include in the papers which didn't utilise EI concept

Search Terms

This scoping review used different search or mesh terms to ensure that all relevant keywords for EI were found, and that the search process was comprehensive by identifying the synonyms and related concepts for EI.

The specific e-search terms used were: ‘‘emotional intelligence’’[mesh] OR ‘‘EI’’ OR ‘‘emotional quotient’’ OR ‘‘EQ’’ OR ‘‘social intelligence’’ OR ‘‘definition of EI’’ OR ‘‘meaning of EI’’ OR ‘‘what is EI OR’’ OR ‘‘measurement of EI’’ OR ‘‘Tools of EI’’ OR ‘‘theories of EI’’ OR ‘‘importance of EI’’ OR ‘‘EI in work’’ OR ‘‘application of EI in education’’ OR ‘‘application of EI in organisation’’ OR ‘‘application of EI in health and education’’.

Search of Databases

To increase the breadth of the review, a wide variety of research literature databases were searched, which included CINAHL MEDLINE, PsycINFO, PubMed, Scopus, EBSCO Health Source, ERIC, Cochrane Library, and World Wide Science.

Screening Titles, Abstracts and Full Papers

The researcher screened all the titles identified against the inclusion and exclusion criteria, then the abstracts and reviews, and subsequently obtained the full papers. The summary of the results of the search, removal of duplicate articles, selection of studies and final full list of the studies included are presented in a Preferred Reporting Items for Systematic

Reviews and Meta-Analyses (PRISMA) flow diagram, as recommended for this purpose (Moher et al.,2009) – see Figure 2.1 below.

Data Extraction

For data extraction, a table format was used to chart the results describing the key characteristics included in the study, as relevant to the scoping review questions. These included:

1. Author(s)
2. Year
3. Source/Country of Origin
4. Aims/Purpose
5. Study of Population and Sample Size, if applicable
6. Methodology
7. Key Findings in relation to review questions.

2.2.5 Results

The PRISMA flow diagram shows how 49 papers met the inclusion criteria. The first stage of the search yielded 159 papers from the databases and search engines; other sources such as cross-references provided an additional 75 papers. After removing the duplicates, 100 papers remained. Out of these, 45 papers did not meet the inclusion criteria and hence were removed. From the resulting 55 papers, another 6 were removed as they did not have a clear concept of EI. This process of steps finally yielded 49 full papers for data extraction (see Figure 2.1).

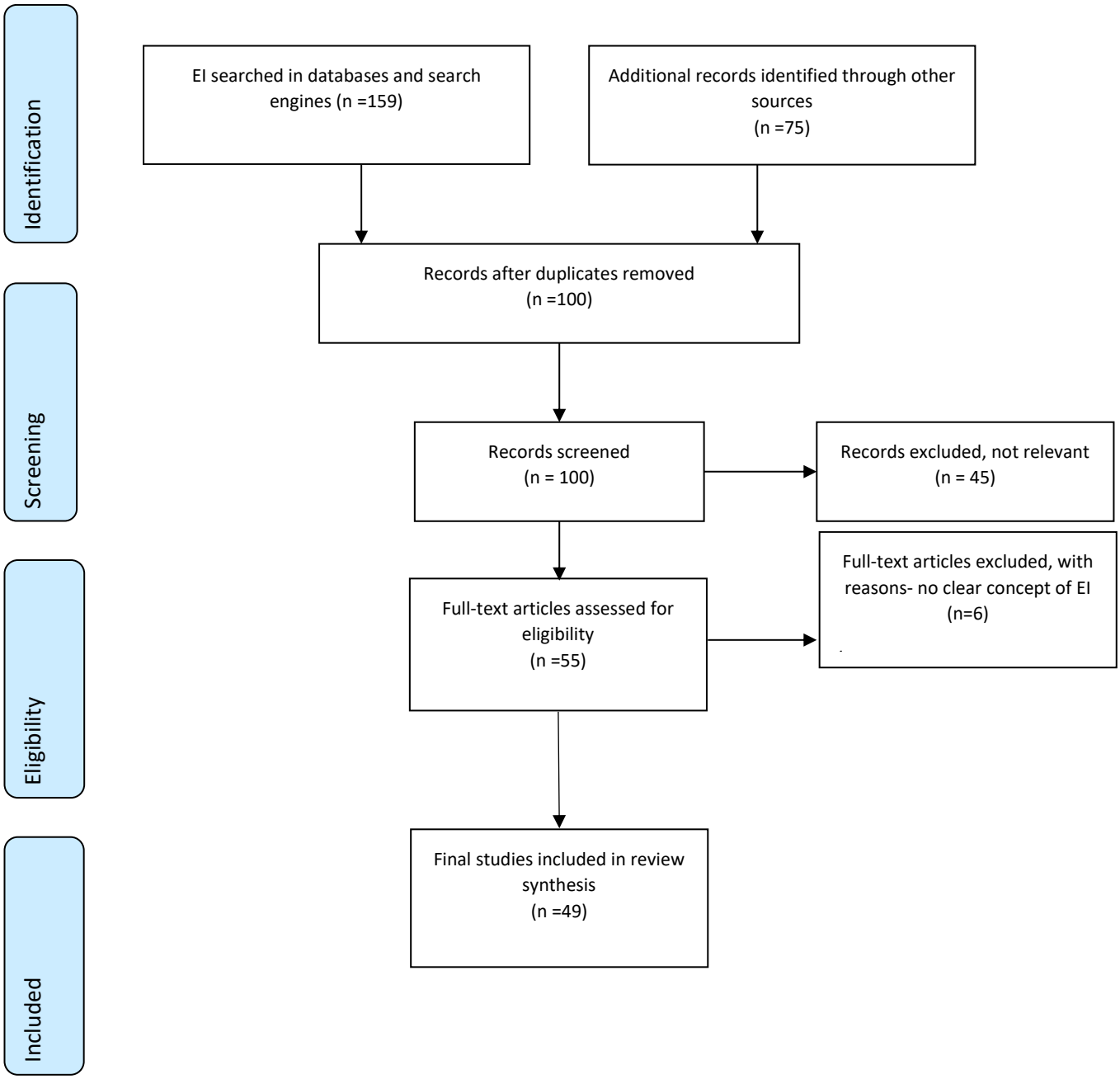


Figure 2.1: The Process of Database Search, Screening Titles, Abstracts and Selection of the Studies included in this Scoping Review (PRISMA)

A descriptive summary of the 49 included papers is presented in Appendix 1. Those tables reflect the authors, year, type of study or design, context, objective, and main findings. The selected 49 papers are categorised in Table 2.3.

Table 2.3: Frequencies of Various Categories of Papers

Type of Paper	Number	Percentage
Review	20	40.8%
Quantitative	24	49.0%
Qualitative	2	4.1%
Mixed	1	2.0%
Meta analyses	2	4.1%
Total	49	100.0%

Twenty mainly review papers were global and therefore not country specific. Most papers were from Western countries; eleven of them were from the United States of America (USA), four from the United Kingdom (UK), and three from Canada; two studies were from India, China and Greece; and one from each of Korea, Taiwan, Malaysia, Austria, with one paper not identifying a population.

2.2.5.1 Scoping Review Q1: What are the main definitions of EI?

A range of definitions emerged. However, whilst these varied, they demonstrated consensus in that all definitions revolve around an ability to apply and utilise emotions - one's own and from others - in selecting the most appropriate actions in life situations. According to Salovey and Mayer (1999), EI is defined as a person's ability to perceive emotions and to retrieve and create emotions that help thoughts, as well as to comprehend emotions and related knowledge, so that such emotions can be thoughtfully regulated to help in intellectual growth (Mayer & Salovey, 1997).

A concept of EI very close to that of the Mayer group was identified by Brannick et al. (2009), who proposed that EI is the ability to perceive emotions in the self and others and to understand, regulate and use such information in productive ways. Hence, EI helps in processing complex emotional information with the purpose of guiding thoughts and actions with the ability to realise and manage social situations and related incidents (Mayer et al., 2008; Jacobs et al., 2008).

Emotionally intelligent persons are expected to be emotionally competent, which could be the real predictor of success, rather than the IQ, as was previously thought (Goleman, 1995). EI is an acquired skill, which can be learned, and which can improve performance. Thus, emotionally competent individuals are able to utilise and apply EI at work (Goleman, 1998). This implies that training can improve EI and subsequently lead to having better emotional competencies.

Goleman and Boyatzis (2008) defined emotional intelligence from another perspective as, *"a set of interpersonal competencies built on specific neural circuits (and related endocrine systems) that inspire others to be effective."* (p 3). In this work, the authors tried to correlate EI with leadership capabilities. They noted that an effective leader builds powerful social circuits, extending their concept of emotional intelligence to a more relationship-based construct for assessing leadership and this was termed social intelligence. Accordingly, EI is a group of interpersonal aptitudes that instigate the person to be more efficient.

According to Goleman (1998), EI has five dimensions: self-awareness, self-regulation, motivation, empathy and social skills. Self-awareness refers to a person's ability to know their internal likes, resources, and feelings. Self-regulation relates to the extent one can manage one's own desires, compulsions, and resources. Motivation refers to the emotional drive that helps in achieving goals. Empathy is the ability to understand others' emotions, desires and worries. Social skills refer to the extent to which a person can stimulate the right action in others (Pooya et al., 2013).

Separately, Goleman (2006) categorised the components of EI into personal competence, social competence, and motivation. Personal competence relates to the ability of self-management and includes self-awareness and self-regulation. The social component is concerned with handling relations with others, to include empathy and social skills. Motivation is the drive to achieve goals, which includes achievement drive, commitment, initiative and optimism.

Emotional intelligence definitions have been expanded to include competencies to be more than the cognitive ability that might contribute to success. As an example of that, Bar-On defined EI as: *'an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures*' (Bar-On, 1997, p.12). The effective aspect of personality is integrated to the EI concept; hence

emotional intelligence is conceptualised as a trait. Petrides (2009) introduced 'trait' in emotional intelligence and defined it as a constellation of emotional perceptions located at the lower levels of personality hierarchies (Petrides et al., 2007). Personality is an enormous domain that includes characteristics like motivation, interests, morals, emotional traits, social traits and many others. Petrides (2009) identified EI as 15 facets from four broad domains (well-being, self-control, emotionality and sociability), and suggests that certain emotional traits and self-perceptions form a part of one's personality, which is starting to gain more acceptance.

In general, the recent definitions of EI include the many personal competencies that are used to be more satisfied in one's life, such as optimism, a sense of humour, emotional regulation, resiliency, flexibility, sense of enjoyment, emotional labour, self-efficacy, assertiveness, self-awareness, communication process, and managing stress ability (Mayer, 2014).

2.2.5.2 Scoping Review Q2: What theoretical frameworks underpin EI?

There are three main proposed models of EI: ability based, trait based, and mixed based. Ability models may be more theoretical, and trait models may be applicable in leadership situations in organisations. In healthcare, nursing, and education, EI is applied in organisational contexts. Thus, it appears that trait based EI models may be more valid in these circumstances. A combination of both types of models may be more useful than a single model i.e., a mixed one. The mixing can be done at construct or item level to suit the aims of the investigation (Ann & Yang, 2012).

2.2.5.2.1 Ability-based Model

This model includes the ability to perceive, regulate and use emotion, understanding the emotion that is reflected in the thinking process and behaviour adaptation. The ability model looks at emotion as a valuable source to guide the individual to react usefully within a social surrounding. This model sees that individuals vary in their ability to use emotion to process their thinking and cognitive ability, such as problem solving and managing the emotions of themselves and others, which consequently reflects on their reactions and performance in themselves and within a social environment. The ability model concludes that EI has four types of abilities: 1) perceiving emotions, 2) using emotions, 3) understanding emotions, and 4) managing emotions.

Perceiving ability reflects detecting, observing, and identifying emotions, which is a basic ability of EI. Using emotion indicates the ability to use emotion to process the cognitive thinking process and problem solving, while understanding emotions is reflecting the ability to realise the emotions of themselves and others. Lastly, the fourth ability reflects the management of the emotions themselves and others that serve to achieve a goal. In this model EI does not include personality traits (Freudenthaler & Neubauer, 2007) which can ameliorate over time (Côte & Miners, 2006), and develop with age and experience (Goldenberg et al., 2006).

2.2.5.2.2 Trait-based Model

Trait-based models consider EI to be personality characteristics, rather than cognitive abilities and skills that enable an individual to cope positively with surrounding stresses (Petrides & Furnham, 2001). Hence, EI is a part of one's personality within the trait-based models (Sevdalis et al., 2007). Trait EI indicates that perceiving and processing emotions is found to be a lower base of personality hierarchy, and is considered to be a self-perceiving emotion, meaning it is measured via self-reporting. Trait EI should be considered within the framework of a person's personality and the term 'self-efficacy' is included as a main core of Trait EI. Petrides and Furnham (2001) developed Trait EI, based on the concept of self-perceived capability and how a person behaves. Therefore, personality characteristics used to measure emotional intelligence and with the emphasis on self-efficacy are as important as content. Trait emotional intelligence consists of 15 facets distributed between the four personality dimensions: well-being, self-control, emotionality, and sociability (Petrides, 2009), as shown in Figure 2.2.

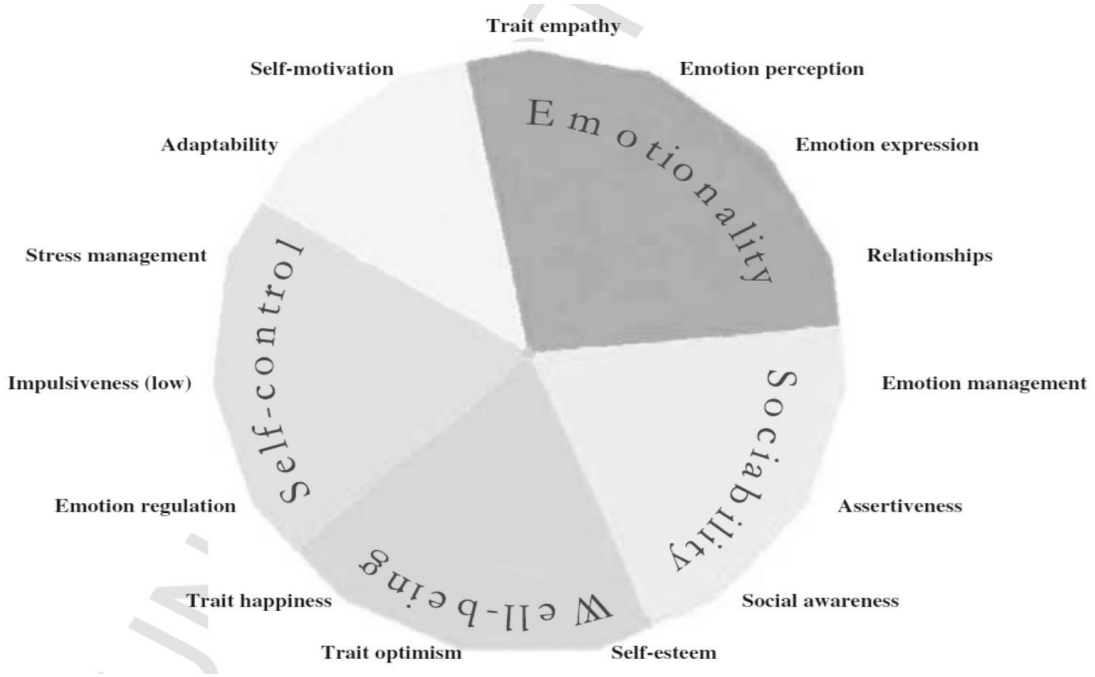


Figure 2.2: Facets of Trait Model of Emotional Intelligence (Siegling et al., 2014, p.61)

The included papers verified that the trait model of EI might overlap with personality factors that influence people's behaviour, as the trait model of EI is supposed to reflect emotional competencies. Trait models seem to be reforming and developing the models from the framework of personality theories (Brody, 2004; Roberts et al., 2006; Roberts et al., 2001). The uses of the Trait model might be useful if researchers need to assess EI as self-reporting, and when they define EI as the main part of personality. Even though EI is considered as personality it can be developed with age. Moreover, it might be that this model is valuable for psychologists or researchers who believe in the personality characteristic as being the main component to drive individual action.

2.2.5.2.3 The Mixed-based Model

Two approaches to mixed-based models have been suggested (Goleman, 1998; Bar-On, 1997). They agree that EI is not limited to skills, abilities, or cognition, but is a wide model including all the person's competencies derived from performance. In both approaches of mixed models, emotional intelligence is not considered to be a natural talent within personality, personal skills or learned ability, but is more that it is a competency which is needed in order to achieve a successful and unique performance.

The first approach of the mixed based model is Goleman's mixed model, which was derived from the conceptualisation of as a competency. More recently, Goleman (2001) has refined the model to have four dimensions and 20 components. The first domain of self-awareness is described as knowing what one feels. The second component of EI, emotional self-management, is the ability to regulate stressful affects such as anxiety and anger, and to hinder impulsivity. Social awareness is the third EI element, which includes the competency of empathy and the ability to read nonverbal cues or any other negative emotions. Relationship management, or social skill, is the fourth EI domain and reflects the ability of an individual to build effective relationships with others. These four competencies are presented clearly in Table 2.4.

Table 2.4: Refined Framework of Goleman's Mixed Model of Emotional Intelligence (Kanesan & Fauzan, 2019, p.5)

	Self (Personal Competence)	**Other (Social Competence)**
Recognition	**Self-Awareness** • Emotional self-awareness • Accurate self-assessment • Self-confidence	**Social Awareness** • Empathy • Service orientation • Organisational awareness
Regulation	**Self-Management** • Emotional self-control • Trustworthiness • Conscientiousness • Adaptability • Achievement drive • Initiative	**Relationship Management** • Developing others • Influence • Communication • Conflict management • Visionary leadership • Catalysing change • Building bonds • Teamwork

The second approach to mixed based models is the Bar-On mixed method of EI. It is considered not as cognitive intelligence, but as competencies and skills in the form of an individual's behaviour to adapt within environmental pressures and demands (Bar-On, 1997). The mixed model of Bar-On consists of five dimensions and 15 components: intrapersonal skills, interpersonal skills, adaptation, stress management and general mood, as shown in Figure 2.3.

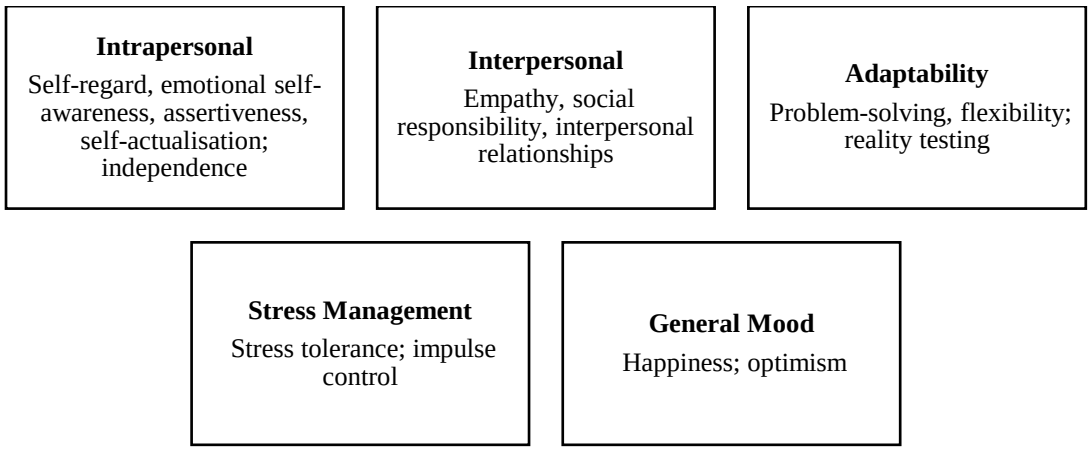


Figure 2.3: Components in Bar-On's Mixed Based Model of Emotional Intelligence

The Bar-On model (Bar-on, 2006) stresses non-cognitive competencies with a test that measures such competencies (the EI test). Nevertheless, the various models of EI amalgamate emotions, mind, and action. The old concept that emotion is a by-product of thought is thus refuted, which gives more importance to emotions in general. An example for that is the study of Ryue and Lee (2012) which reported that the emotions and motivation were the drivers to acquire more learning outcomes.

The three main models of EI are, ability based, trait based, and mixed based, and which model is used, varies according to the purpose of a study. The Ability model is recommended to use if the EI perceived as an emotional abilities and competencies. Trait models are best used if perceived as behavioural tendencies, and to reflect the outcomes or performance. Some studies found the ability model was the most fitting model to describe emotional intelligence as purely EI based and does not mix emotional intelligence with personality components, compared to the mixed model and the trait model (Bar-On, 2006; Emmerling & Goleman, 2003; Petrides et al., 2007).

2.2.5.3 Scoping Review Q3: What tools are used to measure EI?

Six main EI measurement tools were identified, and these based on the three previously applied models. Generally, the Mayer and Schutte SSEIT tools are ability based, TEIQue is trait based, and the Goleman and Bar-On tools are the mixed model. Commonly, trait based EI measuring tools are considered to be more practical although they have the disadvantage of being self-assessment base on the personality participant; thus, the tendency in research is to use more than one tool (Brannick et al., 2009). These six tools are listed below in Table 2.5.

Table 2.5: EI Measurement Tools

N	Measurement Tool	Theorist and Year	Related Model
1	Emotional and Social Competence Inventory (ESCI)	(Boyatzis & Goleman, 2007)	Mixed based model
2	Bar-On Emotional Quotient Inventory (EQ-i)	(Bar-On, 1997)	Mixed based model
3	The Genos Emotional Intelligence, Swinburne University EI Test (SUEIT)	(Palmer & Stough, 2001).	Mixed based model
4	Schutte Self-Report Emotional Intelligence Test (SSEIT)	(Schutte et al., 1998)	Ability based model
5	Trait Emotional Intelligence Questionnaire (TEIQue)	(Petrides & Furnham, 2001)	Trait based model
6	Mayer-Salovey-Caruso Emotional Intelligence Tests (MSCEIT)	(Mayer et al., 2002)	Ability based model

The Emotional and Social Competence Inventory 2.0 (ESCI) (Boyatzis &Goleman, 2007) is a new edition and has updated measures of the old Emotional Competence Inventory (ECI) (1999) and 360-degree tool (2001), which assesses the emotional competencies of individuals and organisations, based on the Goleman model (1998). It measures 18 competencies organised into four dimensions of subscales: self-awareness, self-management, social awareness, and relationship management. Cronbach's alpha values range from 0.68 to 0.87 with an overall average reliability of 0.78. Good construct, discriminant and criterion validity have been demonstrated (Burckle, 2000; Byrne 2003).

The Emotional Quotient Inventory (EQ-i) (Bar-On, 1997-2004) is a self-reporting tool developed to measure a number of constructs related to EI. It measures emotional intelligence (EI) using one total score, five composite scores and 15 sub-scale scores. The fifteen components assessed by EQ-i are: self-regard, emotional self-awareness, assertiveness, independence, empathy, social responsibility, interpersonal relationships, stress tolerance, impulse control, reality testing, flexibility, problem solving, self-actualisation, optimism, and

happiness (Stein et al., 2009). In the case of the original EQ-i, the average Cronbach's alpha reliability value for the total EI score across nine normative samples was 0.79 (Bar-On, 2004). Content validity analyses suggest that all relevant facets of the Bar-On conceptualisation of EI are being captured by the EQ-i 2.0 (Handley, 1997).

The Genos Emotional Intelligence was initially defined by Ben Palmer and Con Stough at Swinburne University (SUEIT) (Palmer & Stough, 2001), and assesses EI relative to the workplace. The seven subscales of the Genos EI Inventory cover the ability to manage emotions in an appropriate, professional, and productive approach at work. The instrument assesses the frequency with which somebody may demonstrate emotionally intelligent actions and consists of 70 questions and includes report rating from managers, peers, and customers. The mean subscale reliability for internal consistency (the Cronbach's alpha scores for the eight subscales tested over five nationalities) ranges from 0.71 to 0.85. A test-reliability coefficient was 0.83 for the subscales. The reliability estimates are closely related to other emotional intelligence self-report measures such as the Bar-On Emotional Quotient Inventory and the Emotional Competence Inventory.

The Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte, 1998) assesses general EI using four sub-scales: emotion perception, utilising emotions, managing self-relevant emotions, and managing others' emotions. The SSEIT is structured around the EI model by Salovey and Mayer (1990) and includes a 33-item self-report using a 1 (strongly agree) to 5 (strongly disagree) scale for responses. Each sub-test score is graded and then combined to give the total score for the participant. Schutte and her colleagues' report a reliability rating of 0.90 (Ciarrochi, et al., 2001).

The Trait Emotional Intelligence Questionnaire, or TEIQue (Petrides & Furnham, 2003) is an openly accessible instrument developed to measure global trait emotional intelligence. Based on the trait emotional intelligence theory, the TEIQue possesses a long form and a short form. TEIQue-LF contains a 153-item self-report using 15 subscales and needs 25 minutes to complete. TEIQue-SF contains a 30-item questionnaire (Petrides & Furnham, 2009), using a 7-point scale ranging from 1 (completely disagree) to 7 (completely agree). Internal consistency and test-retest both indicated scale reliabilities of 0.71 and 0.76 (Petrides & Furnham, 2001). The instrument was applied broadly in different contexts and was presented in 20 languages.

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer et al., 2002), is an ability-based instrument developed to measure the four dimensions of the EI model of Mayer and Salovey. Each of the four components is measured with two objective ability-based tasks. There are different response formats. Some tasks, such as the "picture task," use 5-point rating scales, whereas other tasks, such as the "blends task," use a multiple-choice response. For all the questions, however, answers can be considered correct or incorrect. MSCEIT consists of 141 items and answered through a Likert-type scale from 1 (not at all present/not at all effective) to 5 (very much present/effective), takes 30-45 minutes to complete. MSCEIT provides 15 main scores: Total EI score, two area scores, four branch scores, and eight task scores (Mayer et al.,2002). The facets can be defined as follows: Perceiving Emotion represents the ability to correctly identify how oneself and others are feeling; Facilitating Thought represents the ability to create emotions that impact thought processes; Understanding Emotion represents the ability to understand the causes of emotions; and Managing Emotion represents the ability to create effective strategies that utilize emotions for a specific purpose (Shulman, 2006).

To determine which tool is suitable for use in the empirical study, ability-based tools will be used when emotional abilities and competencies are to be measured, and when it is important to understand the theoretical aspects of emotions. Trait-based measures will be suitable for measuring behavioural tendencies and/or emotional self-efficacy. To measure both aspects, both methods can be used simultaneously (Mattingly & Kraiger, 2019). This decision of selection will be discussed clearly in the discussion section.

2.2.5.4 Scoping Review Q4: What is the importance of Emotional Intelligence in terms of the individual and organisation?

Emotional intelligence can have a great impact on a person's work life and career. The notion of EI has witnessed an increasing interest in the literature of many disciplines due to its role in managing relations and determining the best action. As EI can increase trust and commitment, it has positive repercussions on the productivity and achievement of employees and organisations (Feyerherm & Rice, 2002; Modassir, 2008). This interest has extended from academic research to applications in organisations' human resources departments within various types of fields, such as business, banks, education, and health care (Wong et al., 2010). EI is now assessed in the process of hiring new employees, pay rises, and particularly in the promotion to leadership positions (Cherniss et al., 2000; Paulo et al., 2006). Nonetheless,

training in EI skills, although of great importance, is often disregarded in training programmes for skills development (Sunil, 2009).

Even though EI is essential for social competency in any discipline, it gains more importance in health care, as communication filled with feelings and emotions is a cornerstone in this area. Patient-centred care is founded on relations, communication, and interactions among patients and health care providers, including physicians, nurses, and administrators. Therefore, high emotional intelligence is desirable among health care providers (Freshman & Rubino, 2002). They can improve the health of their organisations, as well as their subordinates if they are emotionally intelligent. Accordingly, the focus is on helping their staff with the emotional side of work-related issues (Vitello-Cicciu, 2002); meanwhile, they are more aware of the emotional needs of their employees (Feather, 2009). Furthermore, the emotionally intelligent providers tend to have more empathy and compassion with their patients, and thus, results in better patient outcomes and satisfaction. They have better provider-patient relationships, better communication, teamwork abilities, and organisational commitment. Hence, nursing research revealed significant and positive correlations between nurses' EI and their job performance, stress management, commitment, and job and career satisfaction and retention (Yang & Chang, 2008).

An important application of EI at work in general, and in healthcare and nursing in particular, is in conflict management. Wang and Kong (2014) demonstrated that the subordinates whose supervisors have high EI tend to use positive conflict resolution strategies, such as the compromising and integrating styles where both parties reach satisfying and potentially creative solutions. Accordingly, an emotionally intelligent individual is more able to identify the causes of conflict and related factors, and can better deal with them, due to their good interpersonal relationships, and effective and competent communication abilities (Leung, 2010).

Another equally important application of EI stems from education in general, and especially in nursing education. The factors affecting the ability to learn are generally related to the physical environment, the teacher, and the student or learner. Nonetheless, the EI factor is often overlooked, although it has been claimed that the students who "feel good about themselves" and/or "have good self-esteem" are better learners, which are integral components of EI (Ann & Yang, 2012).

In addition, when learning is associated with certain stimulant emotions, it tends to be more deeply rooted in the mind, as a stimulus is registered in the amygdala of the brain. Additionally, research in neuroscience has demonstrated that emotions that increase the stress hormone to a certain level in the brain are associated with better memorisation. Therefore, EI training programmes could be successful if they concentrate on the right part of the brain as, according to Goleman (2004), EI is born in the neurotransmitters of the limbic system of the brain.

2.2.6 Discussion

The EI scoping review was conducted to scope and map what is known about the concept. Four review questions guided the review that included searching different databases. Titles, abstracts and full-text papers were screened to ensure they met the inclusion criteria, accessed a range of literature with a final number of 49 papers. The JBI guideline approach seemed to be workable and appropriate for developing this scoping review, and clearly addressed the review questions.

Regarding the first question about the definition of EI, the review2ed studies defined EI from different perspectives, but there is no agreed definition of the EI concept, even after 100 years of active research (Reis et al., 2007). However, the variations of how these are described include mental abilities, competencies, traits or neural influences. The original researchers of EI: Mayer, Salovey and Caruso, recognised EI as a mental ability to address one's feelings and manage feelings. This was later expanded when EI was explored in different contexts including, health, personal relationships and work, to include the notion of EI being a range of competencies (Goleman, 1998). Psychologists considered EI to be an important ability to frame individual personality as a trait (Petrides & Furnham, 2001), and from a neurobiological perspective, EI was defined as the neural influence on the brain and how that inspires other performance (Reis et al., 2007; Krueger et al., 2009). To address the problem of multiple definitions the fact that there is diversity in views and perceptions (Bar-On, 2006; Emmerling & Goleman, 2003; Petrides et al., 2007) needs to be accepted. But in general, all definitions are about recognising one’s own and other emotions and adapting and influencing behaviours. This has implications both for an individual in their family, and social and working lives and also in organisations (Krueger et al., 2009).

In regard to the second review question about the models that have been proposed for EI, the variation in definitions of the EI concept from the theorists led to variations in

developing the models of EI. Therefore models were classified as three main types: 1) ability model, 2) trait model, and 3) mixed model. EI theorists, such as Bar-On, Goleman and Petrides, classified emotional intelligence as non-cognitive, however Salovey and Mayer, the first pioneers of EI, included cognitive ability in their theories. Ability models are considered a standard model to assess the basic components of mental abilities, was developed by the first pioneers of EI and is consistent with the common definition of EI as managing self-emotion and other emotions. Additionally, it is purely EI based and does not mix EI with personality components, compared to the mixed model and the trait model.

In contrast both trait and mixed models identified EI as a set of perceiving skills, and personality traits. Mixed models combine the benefits of the ability model and the trait model. Some of EI theorists suggested that emotional intelligence was not intelligence (IQ), and also was not personality, so it is difficult to assess EI as a group of personality characteristics (Buford, 2002; Austin et al., 2005; Engstrom, 2005).

Application of the models varies. The trait model is more useful when application to practice and leadership are of interest while the ability model tends to be more theoretically based and used in research. Nonetheless, any EI model is based on a hierarchy extending from the basic psychological process of perceiving and expressing emotions to the higher, more complex process of the reflective regulation of emotions (Feather, 2009). Therefore, the main concept is the management of one's emotions in addition to recognising one's interdependence with others (Ann & Yang, 2012). Based on all the evidence in this scoping review, it might be that the ability model is used as a standard to understand and assess EI. While the trait EI model a might be more applicable regards the main purpose of this study since it tends to measure typical behaviour, and was applied in health care, nursing and education. The trait model tends also to give a good prediction of actual outcomes in a range of conditions such as engagement and intention to stay in the work (Petrides & Furnham, 2000).

Six measurement tools emerged as the most common measurements used to assess EI and aligned with the three models and therefore the application of each of them depends upon purpose (Dawda & Hart, 2000; Kohan, 2002; Brackett, 2003). Two were based on the ability model: the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) and the Self-Report Emotional Intelligence Test (SSEIT). Ability tools provide a good reflection of individuals' ability to understand emotions and how these emotions work. A tool that reflects the ability model would be useful if the purpose is to understand the theory of EI and also useful for some

researchers whose consider a basic definition proposed by Mayer et al. in their earlier writings, and for also to assess emotional abilities and competencies.

The most common tool based on the trait model was the Trait Emotional Intelligence Questionnaire (TEIQue), developed by Petrides and Furnham (2000) and this tool includes 15 facets of EI. The purpose is to assess behavioural tendencies and self-efficacy and how EI might lead to positive outcomes such as satisfaction and good organisation outcomes (Petrides & Furnham, 2000). Specifically, trait measures are also applicable to assess typical behaviour to lead to positive outcomes such as, intention to stay in work, engagement, and good performance. Therefore, traits measurement might be chosen to assess the EI in the empirical work because it is likely to achieve the purpose of this study, but other important criteria should be considered later to guide tool choice.

The two tools of the Bar-On Emotional Quotient Inventory (EQ-i) and the Emotional and Social Competence Inventory (ESCI), however, are based on the mixed models. The mixed test measures a grouping of traits, social skills and competencies that might overlap with personality tools (Brackett & Mayer, 2003; Lopes, Salovey, Cote & Beers, 2005; Brackett & Salovey, 2006; Mayer, Roberts & Barsade, 2008; Mayer et al., 2008). All the emerged tools demonstrated acceptable psychometric properties, and all of them were applicable to be used according to the purpose of this study. For example, however, these will be determined and discussed in the final decision before conducting the empirical work.

The review found, in addressing the fourth review question, that EI had a positive influence on the person and career, being applicable in broad and various fields such as the workplace, health care, and education. People who acquired EI competencies are more likely to tolerate stressors and cope with difficulties and demands and be more satisfied with life and their work environments (Julian, 2005; Slaski & Cartwright, 2003; Bar-On et al., 2006; Dries & Pepermans, 2007; Iordanoglou, 2007; Kafetsios & Loumakou, 2007). Broad use of EI was found valuable when applied to skills development, recruitment, promotion, and leadership.

EI competencies can be learnt and acquired. This is therefore an important personal resource leading to positive emotional and organisational outcomes in most fields of work. EI could be fostered in education to increase self-esteem, productivity, and engagement, leading to an increase in intention to stay in work (Stein et al., 2009; Parker et al., 2004). Applying EI in a health setting was found useful to improve patient care, communication and relationships

with patients, and helping to increase commitment at work. Additionally, the literature highlighted the neural function of EI on physical and mental health improvement. EI has been associated with neural activity in the frontal polar region, which is linked to mood and anxiety disorders. Sensitively analysis of EI to remedial interventions showed improvement in the emotional intelligence of people with limited social skills (Betlow, 2005). Review studies revealed that there was a valuable influence of EI on personal and organisational outcomes. Therefore, it could be useful to explore the relationship between EI and intention to remain in academic within the Saudi context.

2.2.6.1 Strength of Scoping Review

This review was conducted using a defined approach following the JBI guideline which provided a rigorous systematic structure and a good basis for developing the study further. There were 49 included papers that successfully answered all the review questions and provided a deep understanding of EI and highlighted different definitions and models. Moreover, this scoping review identified numerous measures which demonstrated good psychometric adequacy and aligned with the definitions and models. Their use was varied to address the different purpose of studies. The reviewed studies identified other variables and outcomes that influenced the main issue of the study i.e., intention to remain. The limitations will be covered in review gap section.

2.2.7 Conclusion of Scoping Review 1

In conclusion, there was no universally accepted definition of EI concept but there is an agreement that EI is about perceiving and applying and manging the self-emotion and other emotions. Four main definitions of EI emerged and could be categorised as: mental abilities, competencies, traits or neural influences (Ryue & Lee, 2012) These definitions aligned with the three main models of EI (ability-based, trait-based, and mixed-based), and from these models, six main tools were identified to measure EI. The selection of tools will be informed by the purpose of study, the psychometric adequacy and applicablity.

EI is important within healthcare and for those who provide education in healthcare. EI is about more than just how it relates to how an individual manages and their own emotions but can be applied to both social and work lives (Barsade & Gibson, 1998). People with high EI tend to be more self-aware, are better in managing conflict, adapting behaviour in self and others, are better problem solvers and therefore may impact positively on an organisation’s

outcomes such as commitment, engagement and intention to stay. Importantly EI can be learned and there is therefore scope for organisations to support EI development in their workforce (Feyerherm & Rice, 2002).

2.2.7.1 Review Gaps

A secondary aim of this scoping review was to identify factors or issues associated with EI that might influence the main focus of this PhD study i.e., intention to remain. This review revealed that literature around the influence of EI is broad and general, without any specification of the direction or relationship with other factors that influence and keep people in their jobs.

There were other factors that emerged that could influence an individual's career choices and performance. These included self-efficacy, relationships with colleagues and supervisors, organisational support, work challenges, and demands (Barsade & Gibson, 1998; Feyerherm & Rice, 2002; Iordanoglou, 2007; Jain & Sinha, 2005; Ryue & Lee, 2012; Bar-On, 2006). Therefore, it is better to systematically review these factors and outcomes in a structured framework to describe the influence of predictors on the emotional and organisation outcomes.

Scoping review studies identified broad studies in the database, without appraising the quality of the evidence; therefore, this scoping review cannot determine whether certain studies give robust or generalisable results (Arksey & O'Malley, 2005). In addition, most of the articles were from the USA and a Western context. It is therefore important to understand EI and how this may relate to intention to remain in a Middle Eastern context. One person (the researcher) reviewed the paper and thus some papers may have been missing.

Most of the findings in the current review came from reviews and quantitative research methods. There is a shortage of qualitative research and thus, this scoping review alone is insufficient to guide and inform an empirical study. To address these gaps there is a need for a systematic review to identify other resources which are associated with personal outcomes and organisational outcomes (e.g. turnover intention, turnover, and job performance) in an academic setting in both Western and Arabic literature.

2.2.8 Summary of recent evidence (post 2016)

The recent EI literature generally emphasised the use of EI as motivator for effective performance and managing the negative consequences of the work environment specifically

stress. In addition, recent literature has focused on integration of various models to promote greater understanding and application of EI. More specifically studies have focussed on the relationship between EI and stress (Sunil and Rooprai, 2019; Rosenthal, 2020; Samsonovich, 2020), how to use EI to reduce the negative effects of stress (Mattingly and Kraiger, 2019), how to improve the efficacy of teaching by using EI (Kotsou et al., 2019), and finding a suitable measure of EI depending on the context (O'Connor et al., 2019).

Regulating emotions can be useful in dealing with stressful situations. Some of the methods which people use for regulating emotions were ability to express emotions in some form, using suitable coping and management skills such as breathing techniques, and using teammates as the motivator for positive effective performance (Rosenthal, 2020). Recently to overcome the variation of using different models of EI, Samsonovich (2020) proposed a framework for integration of theories, models and experimental approaches for better understanding of EI and the application of EI in different situations. Samsonovich (2020) identified three elements of emotional cognition, namely, an emotional state, an appraisal, and a moral schema. These elements are used more broadly to integrate all the EI models. Sunil and Rooprai (2019) investigated the measurement of EI as a predictor in managing stress and anxiety; they found a significant negative relationship between EI and the variables of stress and anxiety as when EI increased that led to reduced stress and anxiety in the workplace and reduced related negative consequences such as absenteeism, dissatisfaction, health problems and high staff turnover.

EI training is reported as having has a positive effect in terms of improving communication, work relationships, decision-making and engagement, and reducing the negative effects of stress. EI coaching at levels of leadership, coaches and facilitators, employees and teams can help to achieve these benefits (Mattingly and Kraiger, 2019). In the education system, improving teaching efficacy or empathy of teachers by applying EI was debated by Kotsou et al. (2019) but there is still a need for additional research in this area. The difference between the ability EI, trait EI and mixed EI measures was studied and highlighted by O'Connor et al., (2019) and they suggested that potential users need to choose the measure of EI which is most suitable and appropriate for their purpose.

2.3 Scoping Review 2 - Job Satisfaction (JS)

2.3.1 Historical context of Job Satisfaction

The study of job satisfaction as a concept began in the 1920's and 30's. Whilst there is no one agreed definition, there has been consensus that job satisfaction is about how an individual feels about their job and the meaning they derive from it (Aziri, 2011). Hawthorne (from 1924 to 1932) was the first and most prominent pioneer in studying the concept of job satisfaction and his studies focused on understanding the impact of one's work environment (and its components such as breaks, work hours, wages, etc). The most notable finding from the Hawthorne studies was identifying the positive effect of various working conditions on increasing workers' productivity. This was followed by Hoppock's Study of 1935 which sought to understand two questions - First, 'Are workers happy?' Second, 'Are some workers happier than others are?' (Rafferty & Griffin, 2009). This was perhaps the first attempt at systematically understanding the factors that contribute towards job satisfaction of employees. This study was followed by the work of Brayfield and Crockett (1945) that indicated the relationship between increasing JS of employees and positive and effective performances.

By the 1950s understanding of JS and its impact on employees and organisations became clearer due to more theoretical developments of the concept evolving. For example, Schaffer (1953) explored factors contributing towards dissatisfaction at work, including factors such as an individual's drive and ability to use opportunities. This was an important study as it encompassed the individual factors that influence job satisfaction rather than strictly organisational ones. In the 1950's through a review of the research on job satisfaction, Herzberg (1959) concluded that there was indeed a relationship between one's job satisfaction and their work outcomes (e.g., revenue or performance).The two-factor theory or the motivator-hygiene theory found that hygiene factors such as workload lead to dissatisfaction while the motivation factors such as opportunities increase JS that in turn subsequently increases positive outcomes for the individuals and the organisations. Hence, it is evident that by the 1950's the understanding of the linkages between JS and intention to remain were brought to light and gained prominence. The 1960s might be reflected the 'golden time' of research into JS and this was advanced mainly by psychologists who sought to develop the JS theoretical base (Wright, 2006). In summary, the studies relating to JS that were conducted

between the 1920s to 1960s identified the factors which influence performance and job satisfaction. These factors included individual factors, organisational factors, and working conditions.

2.3.2 Introduction and Background

The concept 'Job Satisfaction' usually means the satisfaction an individual gets out of a well-done job. This job may be personal or for family, community or a business organisation (Spector, 1997). In this scoping review, only the job satisfaction an employee gets is considered. In this context, when people have high job satisfaction there are benefits to both the individual (e.g., a good emotional and mental state) and the organisation (e.g. high job performance) (Statt, 2004). In this respect, job satisfaction may serve as an indicator of organisational activities (Aziri, 2011) that could be associated with either a quantitative or qualitative personal feeling of achievement (Mullins, 2005). Accordingly, a satisfied and happy employee is a successful employee, and that leads to positive organisational outcomes (Aziri, 2011; To & Tam, 2014). Job dissatisfaction has significant negative consequences, such as a lack of loyalty, increased absenteeism, and a higher level of accidents (Knauth, 2007).

Job satisfaction is thought to be one of the main factors to determine the efficiency and effectiveness of organisations. Thus, job satisfaction plays a critical role in the employee's performance and affects his/her well-being, as well as employee relations and turnover (Dugguh & Dennis, 2014). An employee's level of job satisfaction and perceived fairness consequently influences his/her job performance (Vandenabeele, 2009). All these parameters are interrelated, and one may lead to another; for instance, high job satisfaction may ultimately lead to a positive job attitude with subsequently better performance (Chen et al., 2012).

Work is an essential matter for all populations across all nations. Many people spend most of their days at work, and thus the concept of well-being at work is vital as it is closely linked to job satisfaction. Well-being arose originally in the field of psychology, which eventually expanded to all institutions and organisations as a requisite to improve work effectiveness (Judge & Church, 2000). The concept of job satisfaction has been studied in many fields such as business, education, psychology, sociology and also in medicine and nursing. There are numerous debates about the term 'job satisfaction' and its definitions have been increasingly challenged for many years. Hence, many researchers, organisations and institutions have not been able to propose a clear definition or meaning; indeed, concepts of

job satisfaction have been vague in relation to its uses in various contexts. Nowadays, all organisations seek to reach their goals and outcomes through employee satisfaction.

Based on the above observations, a scoping review for research on job satisfaction needed to be performed to map out what was known about JS and the influence of JS on personal and organisation outcomes, specifically on the problem of intention to remain. The procedure used for this scoping review has been outlined in the next section.

2.3.2.1 Aim

The aim of this scoping review is to scope and map the definitions and meaning of job satisfaction, applicable theories and measurements, and to assess its importance and influence on the person and in organisations.

2.3.2.2 Scoping Review Questions

To facilitate the search for literature and selection to fit for the above aim, five questions were framed, as given below:

1) What are the definitions of Job satisfaction (JS)?

2) How is job satisfaction conceptualised?

3) What are the theories of job satisfaction?

4) How is job satisfaction measured?

5) What is the importance and application of JS in terms of the individual and the organisation?

2.3.3 Methods

The Joanna Briggs Institute (JBI) guidelines

JBI guidelines (Peters et al., 2015) for developing scoping review as a standard approach.

2.3.3.1 Method of Literature Search and Selection

2.3.3.1.1 Search Terms

This study used different search terms or mesh terms for job satisfaction [mesh] OR ‘‘JS’’ OR ‘‘satisfaction at work”, OR ‘‘concepts of job satisfaction,’’ OR ‘‘work satisfaction,’’ OR ‘‘definition of job satisfaction,’’ OR ‘‘meaning of job satisfaction,’’ OR ‘‘what is job satisfaction?’’ OR ‘‘measurement of job satisfaction,’’ OR ‘‘tools of job satisfaction,’’ OR ‘‘theories of job satisfaction,’’ OR ‘‘importance of job satisfaction,’’ OR ‘‘job satisfaction in nursing,’’ OR ‘‘application of EI in education,’’ OR ‘‘application of EI in health care’’.

2.3.3.1.2 Search of Databases

Searches of a wide variety of research literature databases were used: MEDLINE, CINAHL, CINAHL PLUS, ERIC, PSYCH INFO, ASSIA, NEXIS, SCOPUS, WEB OF SCIENCE, TRIP, COCHRANE, NICE, EBSCO, AJOL.

2.3.3.1.3 Inclusion and Exclusion Criteria

The inclusion criteria included all studies that identified JS concepts: definitions of JS; studies that discussed the theories and tools which were used to measure JS; importance and application of JS in the organisation, e.g. health, nursing, education and institutions, and all geographic locations were included. This scoping review included reviews, qualitative, quantitative studies and meta-analyses, with studies published in English that were conducted between the years 1985 and 2016. The exclusion criteria included those articles that did not fit within the time period decided upon. In addition to this, studies from languages other than English were excluded as was grey literature and unpublished studies. These criteria are presented in Table 2.6.

Table 2.6: Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Time	Time period (1985 -2016)	Studies outside these dates
Language	English	Non-English studies
Type of papers	All published literature or research	Papers that were not published. Papers that were editorials or discussions or personal opinion pieces
Literature Focus	Papers where the overwhelming theme	Studies that did not cover JS concept

	related to the job satisfaction concept	
Population	Participants who included in the papers that related to or used job satisfaction concept	Participants included in papers that did not used and related to job satisfaction concept

2.3.3.1.4 Screening Titles, Abstracts and Full Papers' Extraction

The researcher screened all identified titles against the inclusion and exclusion criteria, followed by screening the abstracts, and subsequently obtained the full papers. The summary results of the search, removal of duplicate articles, selection of studies and final full list of the studies included are presented in a flow chart. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram was used, as recommended for this purpose (Moher et al., 2009).

For data extraction, a table format was used to chart the results describing the key characteristics included in the study, as relevant to the scoping review questions. These included:

1. Author(s)
2. Year
3. Source/Country of origin
4. Aims/Purpose
5. Study of population and sample size, if applicable
6. Methodology
7. Key findings in relation to review questions

2.3.4 Results

The first stage of the search yielded 279 papers from the databases and search engines. Other sources, such as cross-references, provided an additional 23 papers. After removing the duplicates, there were 245 papers. Out of these, 65 papers did not meet the inclusion criteria and hence were removed. From the resulting 180 papers, another 130 were removed as they did not have a clear concept of JS. These processes finally yielded 50 usable full papers for data extraction. This process is shown clearly in the following PRISMA diagram (see Figure 2.4).

The data were extracted from the retrieved full-text papers regarding meaning and definitions of JS concept; JS tools and measurements; theories that address JS; and applications of JS in organisations, health, nursing, and education settings.

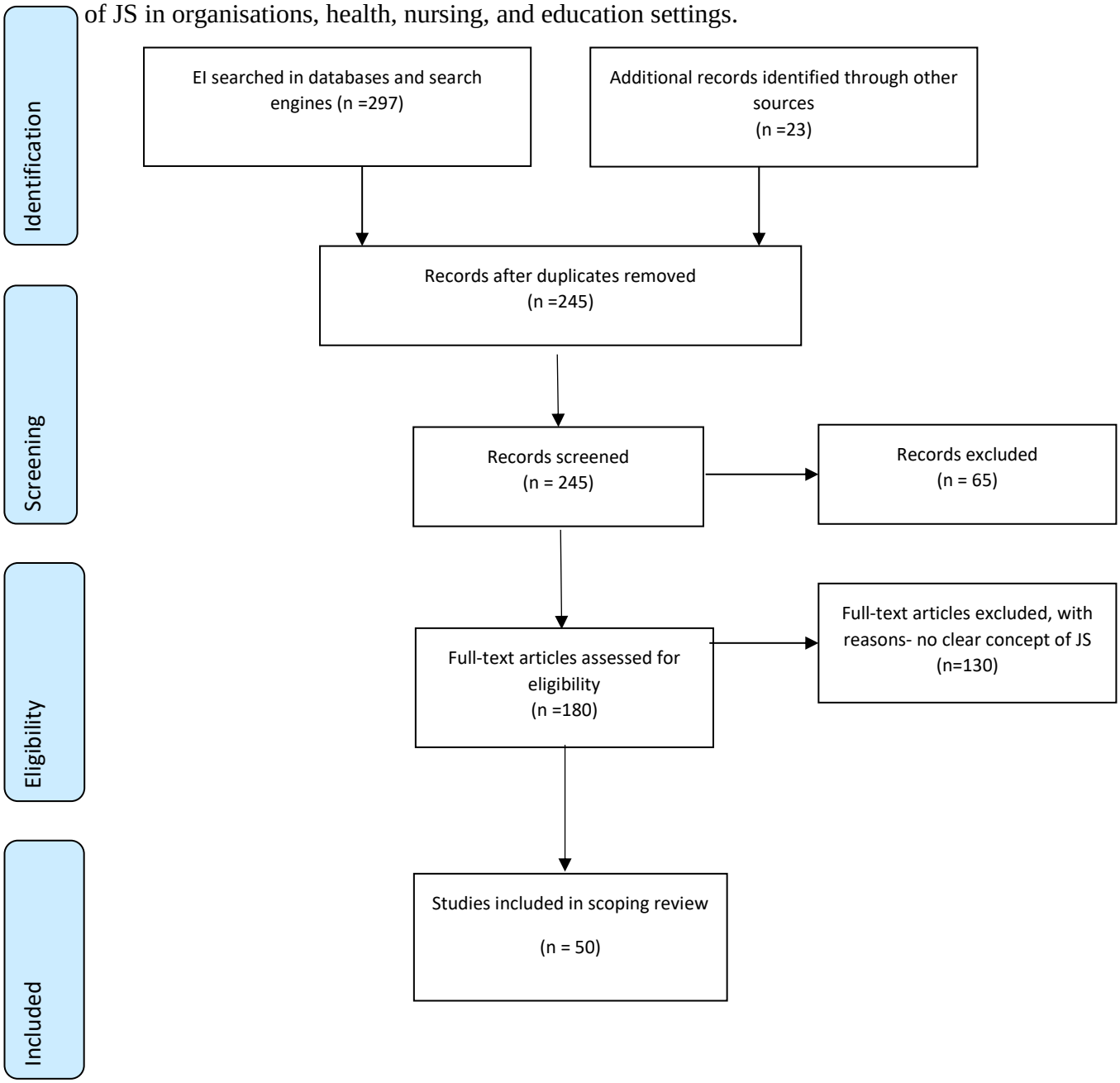


Figure 2.4: The Process of the Database Search, Screening Titles, Abstracts and Selection of the Studies included in this Scoping Review (PRISMA)

The summary charting tables for 50 papers conclude the findings for the overall number of studies (see Appendix 2). Those tables reflect the authors and year, type of study or design,

context, objective, and main findings of the studies included. The selected 50 papers were categorised, as given in Table 2.7.

Table 2.7: Frequencies of Various Categories of Papers

Type of Papers	Number	Percentage
Review	10	20.0%
Quantitative	32	64.0%
Qualitative	2	4.0%
Mixed	3	6.0%
Meta analyses	3	6.0%
Total	**50**	100.0%

The 50 obtained papers were published between 1985 and 2016. These publications were reviews or empirical papers, as presented in Table 2.7 Most papers were from western countries: 13 from the United States of America, 4 from the UK, 3 from Africa, 2 from Iran, 2 from Pakistan, 2 from China and 2 from Belgium, one paper came from each of the following: Malaysia, Greece, Lebanon, Namibia, South Africa, Canada, Netherlands, Nigeria and Australia. Other papers were reviews and were published as global reviews from different literatures. The review papers discussed JS in a global context in any organisation where the JS concept was used or applied.

2.3.4.1 Scoping Review Q1: What are the definitions of JS?

The definition of job satisfaction has moved through a long trajectory of different perspectives. All definitions revolve around the personal perspective, including psychological expressions, feelings, attitudes and behaviour towards work. The definitions then developed to include the employers' perspectives in the workplace of the employee's sense of efficiency and accomplishment at work and what they like and dislike about their jobs, in contrast to the organisation's definition of the JS from their perspective and the relationship of job satisfaction to productivity. The organisational definition of JS included JS as an important indicator to evaluate and assess the organisational outcomes. In the following section, various definitions based on these three perspectives are discussed.

In one of the earliest works, Hoppock (1935) defined JS based on the psychological, physiological and environmental circumstances that lead an individual to express his/her personal satisfaction in the job. Here, though JS is a psychological characteristic, it considers one element of an individual's expression towards work. Aziri (2008) defined JS as "*a feeling that appears as a result of the perception that the job enables the material and psychological needs*" (p.98). In addition, certain definitions of JS relate to dispositional emotions or feelings (Hochwarter et al., 1999). Thus, according to Smith, et al., (1969), satisfaction is a feeling of effective responses to facets of the situation. Similarly, Locke (1976, p.1300) defined it as "*a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience*." Here, how an individual emotionally appraises their job is taken into account.

Additionally, to extend the personal perspective, personal behaviour towards work was introduced into the definition. Davis (2000) considered JS to be an outcome of the balance between positive and negative feelings toward a job. Positive feelings lead to satisfaction and negative feelings to dissatisfaction. These job-related emotions and anticipations determined the genuine meaning of job satisfaction. Armstrong's (2006) definition of JS consisted of two indicators, namely feeling and attitude. Accordingly, job satisfaction is a pleasing and positive attitude, whereas job dissatisfaction indicates a non-pleasurable and negative attitude. In the same context, George (2008) defines JS based on employees' feelings and attitudes toward work, including attitudes toward supervisors, peers and subordinates, as well as profits and revenues. These two definitions are similar to the one proposed by Davis (2000). Moorhead and Griffin (2010) defined JS as "*the extent to which a person is gratified or fulfilled by his or her work*". In this definition, gratification is necessary for job satisfaction, which narrows the scope of the term.

Job satisfaction evolved to be defined as more specifically from the perspective of the employee or worker at the workplace. One of the more popular definitions of JS is that by Spector (1997). According to his definition, JS reflects the way that employees feel about their jobs and the extent to which they like or dislike their jobs. This definition explains why job satisfaction and job dissatisfaction can occur in any given situation at work. Hence, job satisfaction implies doing a job that one enjoys, doing it well and being rewarded for one's efforts (Aziri, 2011) so that the employee will like it. Vroom's (1964) definition of job satisfaction focused on the function of the employee at work. Thus, job satisfaction depended on an employee's effective or emotional identification and bonding in their actual work roles.

A closely related aspect in the definition of JS by Kaliski (2007) is an employee's sense of efficiency and accomplishment at work, with associated feelings of contentment and well-being. Accordingly, job satisfaction is imperative to all the feelings of achievement and self-actualisation.

There are also definitions from the employer's viewpoint. In one of them, Kent and Chelladurai (2001) defined JS as an assessment of the intellectual, behavioural, and emotive aspects of job responsibilities by the employee. Also, Chen et al. (2012) define JS as simply an employee's general attitude to his/her job. Organisations define JS as a parameter to measure outcomes, and recently, most institutions have used JS to evaluate their productivity, and job turnover. Organisations relate their effective organisational outcomes to high job satisfaction. Organisations also define JS as an initial outcome and, as a positive and direct effective predictor to organisational outcomes. At the same time, job satisfaction was an indirect outcome of coping with job tasks, demands or workload so that the facets of job satisfaction were linked to the direct outcome of coping with career demands and tasks (Azoury & Doumit, 2003). Moreover, organisational justice was the basis of Greenberg's (1990) definition of job satisfaction. The term "organisational justice" refers to the moral and impartial treatment of employees at work. Implicit in all these definitions is the fact that an individual will remain or progress in his job as long he enjoys being at the organisation.

In all these definitions, job satisfaction has been observed from the individual's, the workplace employee's, and the organisation's perspective, depending upon the relative importance given to perceptive approaches. To apply any definition in the specific context of a study, the relative importance of each of the three perspectives needs to be assessed.

2.3.4.2 Scoping Review Q2: How is the job satisfaction conceptualised?

Job satisfaction has been extensively studied in different disciplines, including nursing, education and business (Wild et al., 2006). Originally, the concept developed from organisational theory (Moore et al., 2006) as a complex subject influenced by multitudes of factors (Coomber & Barriball, 2007) leading to no precise and unified definition in the literature (Jiang, 2004), as was seen above in the 'Definitions' section. Four main concepts of job satisfaction from the literature are discussed in the following sections: job satisfaction as an attitude, as an affect, as an expectation, and as a belief system.

2.3.4.2.1 Job Satisfaction as an Attitude

Attitude refers to a hypothetical construct that reflects an individual's like or dislike for any particular behaviour (Ahmad et al., 2010). It is a mind-set or a trend to act in a certain manner, based on personal experience and nature. The supporters of JS as an attitude include Azoury and Doumit (2003), Lunderen et al. (2005), Judge and Bono (2001), Judge, et al., (2002), Judge et al. (2012), Schleicher et al. (2004), Johnson and Johnson (2000) and Chan, (2001). These authors have shown that JS reflects a positive or negative attitude based on the evaluation of a job situation; indeed, employees have attitudes or opinions about many aspects of their jobs. A job attitude is a set of an employee's own assessment of his/her own job, which, in turn, determines his/her emotions, commitment, and attachment to the job. Nonetheless, the attitude towards one's own work may differ from the attitude towards employers or other job entities Judge et al. (2012).

Under such a broad perspective, JS is affected by many personal and work-related factors including age, gender, personality and the organisational factors of the job characteristics, the policies and procedures, work relationships, stress, and other worker-environment dynamics (Azoury and Doumit 2003). There exists the possibility of a significant association between a key personality trait, core self-evaluation, and job satisfaction through job perception. The positive influence of other personality traits upon JS, such as conscientiousness and extraversion, has also been noted. Significant associations between JS and contextual variables, dispositional attributes, and innate employees' factors have also been found Lunderen et al. (2005).

2.3.4.2.2 Job Satisfaction as an Affect

According to the Affective Events Theory (Weiss & Cropanzano, 1996), affective work experiences contribute to the shaping of employees' job attitudes. Thus, affect becomes a predisposing factor for attitude. The theory postulates that there is a link between job affect and on-the-job behaviours, such as withdrawal or organisational commitment. The theory helps when considering the events that emotionally affect employees and their responses, which may have long-term implications upon employees' attitudes, behaviours and job performance. In this context, JS is considered to be a positive effect, and therefore, attitude to the job (Willem et al., 2007; Yang & Chang, 2008). Additionally, Seo et al. (2004) showed that positive affectivity and negative affectivity are two examples of personality variables that influence job

satisfaction. Also, some definitions of JS (Smith, 1969; Locke, 1976) imply a relationship between JS and affective dispositions.

Even though affect has a direct and significant impact upon attitude, these are two separate constructs with independent cognitive structures (Onur Bodur et al., 2000). While 'feeling' is an affective reaction to a job, 'attitude' is a thought process in relation to it. Therefore, attitude is deeper and more unwavering compared with feeling (Ravari et al., 2012). Nevertheless, attitudes have affective components, which involve the feelings towards the object attitude. The distinction between affect and attitude is important, although this requires tools and techniques to measure the characteristics of each one and their actual roles (Onur Bodur et al., 2000).

The view of JS as an attitudinal disposition towards the job integrates its cognitive (job appraisal) and affective (feelings) dimensions, and also adds a third dimension, namely attitude (Ravari et al., 2012). This is due to the traditional division of attitudes into cognitive, affective, and behavioural dimensions. Subsequently, an evaluative dimension was added to job attitude (Hulin & Judge, 2003). A personality research study demonstrated that there are two dimensions of affective response, namely: trait-positive affect (PA) and trait-negative affect (NA) (Diener & Emmons, 1985). Therefore, both dimensions can be high, low or different in the same person (George, 1992). The two dimensions may influence job attitudes, as well as work outcomes such as organisational commitment and turnover intentions. Therefore, people who have high NA generally have a negative perception of their environment, including their work environment, which leads to low job satisfaction (Moyle, 1995; Iverson et al., 1998).

The possibility of a genetic association for the stability of JS over time exists (Staw & Ross, 1985). According to their meta-analysis, JS stability is related to its affective component, as was observed by Moyle (1995) and also Iverson et al. (1998). Dispositional affectivity has been related to organisational commitment and turnover intentions through its effect on work attitudes. However, affectivity is more related to job performance (Barsade et al., 2003).

2.3.4.2.3 Job Satisfaction as an Expectation

Job satisfaction reflects an employee's perceptions of the quality of work and the objective working conditions through a complex interaction, because people differ in personality, emotions and thinking, and their degree of pessimism or optimism. Such factors can influence an employee's expectations of work and life in general. A good match between

an employee's expectations and objective working conditions leads to a better subjective appraisal of job quality. Additionally, the collective feelings of the employees in an organisation influence individual employees' feelings through their creation of a professional identity (Ravari et al., 2012).

Employee's expectations of work conditions are unobservable. The differences between observed and unobservable job satisfaction and their realistic perceptions of the quality of work may be due to two different reasons. An individual's job satisfaction is a based on the gap between expectations and reality. The second reason is related to unobservable expectations regarding working conditions that do not reflect reality, and which may lead to unlikely high or low levels of satisfaction. Both reasons may alter the levels of satisfaction, as explained in the model of "chance effect" with various degrees of pessimism and optimism that affect one's feelings and expectations (Groot & Oosterbeek, 1994). That means the optimistic employee might have a good feeling and expectation toward work; in contrast the pessimistic employee can expect a negative expectation, and that might not reflect a realistic evaluation.

Furthermore, employees' unmet expectations are associated with lower levels of job involvement, higher turnover rates, lower job satisfaction, and lower levels of commitment and of interpersonal trust (Young & Perrewe, 2000). Unmet expectations are negative predictors of work adjustment (Feij et al., 1995) and this effect is considered higher when compared with personal factors such as a negative affectivity and self-efficacy (Ashforth & Saks, 2000). Job satisfaction not only depends on the nature of the job but also on an employee's expectations from work. Thus, the match between expectation and actual job-related factors is important in job satisfaction.

2.3.4.2.4 Job Satisfaction as a Belief System

Job satisfaction is not a passive concept that occurs spontaneously; it should rather be looked at as an active process in which the employee benefits from his contributions to the organisation. Thus, the employee should intentionally try to achieve JS through his/her own positive actions. This "intentional" aspect of JS is related to the value-attitude-belief system, which makes work meaningful and is determined by influencing employees' emotions, attitudes, and performance. A value is *"an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence*" (Rokeach, 1973, p.5) Hence, values are relative but long-

lasting, providing stability to the employee and the organisation and forming the base of organisational culture which determines behaviour at work (Maio & Olson, 1994).

The value and belief system manipulates personal norms, thus leading to explicit behaviours (Verplanken & Holland, 2002). For instance, in the nursing profession sometimes spiritual values constitute an important factor in nurses' tolerance of difficult tasks (Ravari et al., 2009). Conversely, a study by Hegney et al. (2006) demonstrated that JS declines when intrinsic work values and ethics are not attained in nursing work. Therefore, an employee has to struggle to create and promote job satisfaction.

The term “general values” refers to the beliefs that normal people commonly share regardless of their jobs. General values are further categorised into work values, social values and satisfaction values. Work values are classified into four types, namely: achievement, helping and concern for others, honesty, and fairness. Alternatively, work values may be classified into either being intrinsic or extrinsic. Intrinsic work values point to the extent of the employees’ esteem and non-material aspects of their work such as self-expression, job variety and autonomy. Extrinsic work values relate to the employees’ appreciation of the materialistic aspects of their work, such as remuneration and career progression. In nursing research, JS decreased with unmet intrinsic work values. Intrinsic work aspects, extrinsic work aspects, and social relations at work affected the intention to leave, in addition to its effect on job satisfaction (Taris & Feij, 2001).

Furthermore, studies revealed a significant correlation between value orientation and positive job outcomes, such as JS and commitment (Hegney et al., 2006; Froese & Xiao, 2012). Very few studies addressed the effect of extrinsic versus intrinsic values on negative job outcome, but these included studies on the intention to leave (Spector, 1997) and burnout (Shaufeli et al., 2009). In one study, Vansteenkiste et al. (2007) reported that extrinsic value orientation was associated with lower JS and commitment to work, with higher exhaustion and turnover intention, compared with intrinsic values.

2.3.4.3 Scoping Review Q3: What are the theories of job satisfaction?

Many theories and models discuss the concept of JS from different perceptions and cultures and the impact of JS on work life, as well as on general life.

2.3.4.3.1 Maslow's Theory of the 'Hierarchy of Needs' (1943)

Most literature starts with Maslow's theory of the 'Hierarchy of Needs' (1943) as a basic theory to identify JS as one of the main needs in life. According to this theory, the motivational requirements of an individual may be ordered in a five-level hierarchy. These needs are physiological needs, safety needs, love and belonging needs, esteem needs, and self-actualisation needs. At the fifth and top is the need for self-actualisation, which relates to personal accomplishment and achievement. Overall, the type of achievement in this theory is that of striving to fulfil the need. Maslow argues that the fulfilment of a need leads to the extinction of its inspiring effect, and activation of a higher-level need as a stimulus for further satisfaction, as if a job is considered important, one needs to feel satisfied (Luthans, 2005). Therefore, the higher the level of needs that a job fulfils, the greater is the level of job satisfaction that an employee feels regarding his/her job. Maslow's theory is the most widely mentioned in the theories of fulfilling and applying the need to understand the need of satisfaction at work.

2.3.4.3.2 Reinforcement Theory – Skinner (1953)

The reinforcement theory focuses on the environmental (external) factors that contribute to shaping behaviour. Derived from learning theory, it is also known as "Behaviourism," or "Operant Conditioning." While needs theories focus on personal states (internal needs), the reinforcement theory provides more attention to observable behaviour, as it postulates those stimuli shape behaviours. The theory has four different behavioural contingencies, namely positive reinforcement, negative reinforcement, positive punishment, and negative punishment (Moynihan & Pandey, 2007). The Reinforcement Theory has had substantial application in the workplace. In particular, it explains simply the effect of reward/punishment on employees' behaviour, as its focus is on observable behaviours. Research in this area shows that reinforcement works, as when employees have enough resources and rewards, this will increase the positive consequences, such as job satisfaction (Redmond, 2010).

In a work setting, the theory provides for changing employee behaviour through positive reinforcements such as a salary raise, promotion and increased roles. Negative reinforcements are implemented against specific employees who refuse to perform, raising some unreasonable issues. Within the entire range of employees of these different types, setting a schedule of reinforcement in the organisation will enhance employees' performance

(Redmond, 2010). The application of this theory of increasing reinforcement will increase JS and thus stimulate better employee performance. This promotes intrinsic motivation and self-esteem to help develop an understanding of JS and job performance; therefore, the manager can use pleasant actions, rewards, resources and personal motivation to reach JS status and that actually improves an employee's performance. The reinforcement source might be rewards or personal resources (Piano & Depedri, 2009).

The effect of rewards or punishment on employee satisfaction often wanes over time; the manager, therefore, always needs to think of new ways to maintain employee motivation. In addition, for a punishment to become effective, it should be immediate, intense, unavoidable, and consistent. Lastly, the use of rewards to change behaviour may be viewed as unethical in certain circumstances (Redmond, 2010).

2.3.4.3.3 Herzberg's Motivation/ Hygiene Theory (1959) (Two Factors Theory)

Herzberg et al. (1959) proposed a new theory which is more focused on the satisfaction aspect of work without greatly opposing Maslow's principles. According to this theory, the avoidance of dissatisfaction may motivate people, rather than their needs. Herzberg undertook a motivational study on 200 accountants and engineers, asking them about the factors that motivated them and those that demotivated them at work. Based on the data, the factors were divided into hygiene factors (job non-satisfiers) and motivational factors (job satisfiers). The hygienic or extrinsic factors were concerned with the working conditions, salaries, status, and relationships. The improvement of these factors can only result in a reduction of dissatisfaction. The motivational or intrinsic factors are those that lead to employees' gratification; they may involve feelings towards job position, personal fulfilment, recognition, and responsibilities at work. In general, the motivational factors might be personal or job resources that have the potential to increase job satisfaction. What is more, this theory does not consider satisfaction and dissatisfaction to be two extremes of a single continuum, but actually two separate concepts (Lane et al., 2010).

Overall, Herzberg's theory is very useful when studying job satisfaction (Kim, 2004). The theory was developed in 1959 and its concepts can be applied to workers in modern work environments (Ali, 2009; Lane et al., 2010). It has been applied in order to understand job satisfaction in educational settings (Karimi, 2007), as well as in police officers' work.

2.3.4.3.4 Theory of Needs-Achievement Theory (McClelland, 1961)

McClelland and Associates postulated that some people have a compelling drive to succeed, and therefore, they strive for personal achievement rather than for the rewards of success themselves. Thus, the theory is focused on the need for achievement. It suggests that persons who are motivated by their need to achieve feel more satisfied by responsibility, goal setting, and feedback. Therefore, they prefer challenging jobs and behave as 'high achievers' (Shajahan, 2004). The theory is also known as the 'achievement theory' because of its focus on an achievement motive. However, it is based on achievement, power, and affiliation motives. *Achievement* is the drive to excel and achieve beyond the standards of success. *Power* refers to the desire to have an impact, to be influential, and to control others (Shajahan, 2004; Robbins, 2005). *Affiliation* is the desire to have friends and close interpersonal relationships (Shajahan, 2004). Indeed, those with high affiliation prefer cooperative rather than competitive situations (Robbins, 2005). Therefore, motivating individuals should be directed toward their achievement by cooperating rather than competing in any work situation. To conclude: feeling achievement is one of the main indicators and resources for stimulating job satisfaction.

2.3.4.3.5 Equity Theory (Adams) (1963)

The Equity Theory is primarily a motivation theory, but it additionally addresses the causes of satisfaction/dissatisfaction. According to this theory, a person's satisfaction is determined by his/her perceived equity, which in turn is determined by his/her input-output balance compared to that of others'. The input-output balance is the perceived ratio of what a person receives from his/her job, relative to what he/she contributes to the job. The theory argues that both under- and over- rewarding leads to dissatisfaction, as over-rewarding leads to a feeling of guilt, whereas under-rewarding leads to a feeling of a lack of impartiality and fairness, as well as dissatisfaction. The Equity Theory has been extensively studied over the past few decades under the title of distributive justice. The research demonstrated that rewards enhance job satisfaction only when they are valued and perceived as fair by employees (Au & Cheng, 2008; Yusof & Shamsuri, 2006).

2.3.4.3.6 Vroom’s Expectancy Theory (1964)

The principle underlying Vroom's Expectancy Theory is that *"people are motivated to work to achieve a goal if they believe that that goal is worthy and there is the probability that what they do will help them in achieving their goals"*. Vroom emphasises the expectancy of

goal achievement and considers that goal achievement should be directed to better work performance through positive rewards. The theory is based on three major variables, namely valance, expectancy and instrumentality (VIE). *Valance* is the strength of an individual's preference (value, incentive, attitude, and expected utility) for a particular output. *Expectancy* is the probability that a particular effort will lead to a particular first-level outcome. *Instrumentality* is the degree to which a first-level outcome will lead to a desired second-level outcome. As an example, an employee can be motivated (motivational force or effort) towards better performance (first-level output) to realise promotion (second-level output) (Luthans, 2005).

Vroom's Expectancy Theory recognises the importance of various individual needs and motivations, emphasising that an employee must value the rewards used to influence his/her behaviour (Perry et al., 2006). Therefore, Robbins (2005) considered this theory to be the "*most comprehensive theory of motivation and job satisfaction".* The relationship between the three variables of the theory can be expressed as "Motivation = Valance × Expectancy × Instrumentality". However, the main shortfall of Vroom 's Expectancy Theory is that it implies that people act rationally and do calculations following the evaluation of the situation and the potential outcomes, while this hardly ever occurs in the real world. This also denies the role of emotion (Robbins, 2005).

2.3.4.3.7 Job Characteristics Theory (Hackman & Oldham) (1975-76)

The Job Characteristics Theory by Hackman and Oldham (1975-76) suggests that the meaningfulness of a job to an employee is determined by how much diversity of abilities and skills the job requires, how much it contributes to the accomplishment of a task and the extent of its importance for other people's lives. Added to these is the ability of the job to enhance an employee's feelings of personal responsibility and autonomy in choosing the means and methods for completing the work, and to provide the employee with the required knowledge and information to appraise the effects of his/her own efforts. Thus, the motivating potential of job characteristics can influence an employee's critical psychological state, which is essential to an employee's internal work motivation. In effect, this model specifies five core job characteristics (skill variety, task identity, task significance, autonomy and feedback), which influence three critical psychological states (experienced meaningfulness, experienced responsibility for outcomes and knowledge of the actual results) (Broedling, 1977; Hackman & Oldham, 1980).

In the Job Characteristics Theory, the outcomes of job design are influenced by several moderators, which include the differences to which various employees desire personal or psychological progress (Perry et al., 2006). The clarity of tasks also provides clarity of workforce and autonomy enjoyed, and positive feedback leads to greater job satisfaction (Moynihan & Pandey, 2007). Jobs that are rich in motivating characteristics to trigger psychological states, in turn increase the likelihood of the desired outcomes and a high level of satisfaction. For example, the significance of a task can ignite a sense of meaningfulness of work and a feeling of satisfaction that leads to an effective performance (Perry et al., 2006).

2.3.4.3.8 Porter/Lawler Expectancy Model (1968)

Another important model is that proposed by Porter and Lawler (1968), the Expectancy Model. According to this model, 'effort' (or strength of motivation) does not lead directly to 'performance,' but this is actually moderated by an employee's 'abilities and traits' and 'role perceptions and 'satisfaction' is determined by the 'probability of receiving fair rewards', rather than by performance (Weihrich & Koontz, 1999, p.473). Motivation is influenced by interconnected cognitive factors, such as the 'perceived effort-reward probability'. These 'perceived equitable rewards' determine an employee's 'job-satisfaction' (Luthans, 2005, p.249). However, before this effort is translated into performance, the 'abilities and traits', as well as 'role-perceptions' of employees influence the efforts used for performance. In Porter/Lawler's model, the process of motivation and satisfaction is considered to be a continuing one. This means that the employee who wants to continue having the rewards has to persistently struggle for the desired achievement (Luthans, 2005).

In summary, most theories explain job satisfaction based on the factors that shape an employee's behaviour or attitude toward his/her job. Some theories, like those of Maslow, describe job satisfaction as an essential need in our life. Some others, like the theories of Vroom and Hackman, consider goal achievement to be a direct motivator as a personal factor for better work performance leading to higher satisfaction. Porter and Lawler stipulate those rewards as job resources factors can trigger job satisfaction. All these theories and models of job satisfaction are based on the claim that motivation (e.g. rewards, developments, salary, self-esteem) directs individuals towards satisfaction and considers this motivation issue to be an internal force. Only Skinner's theory stresses external factors, such as work environment factors as the reasons for job satisfaction.

2.3.4.4 Scoping Review Q4: How is job satisfaction measured?

The scoping review identified the seven common instruments used to measure JS, and they seem to have met the quality criteria for reliability and validity: The Job in General Scale (JIG); the Andrew and Withey Job Satisfaction Questionnaire; the Job Satisfaction Survey (JSS); the Emergency Physician Job Satisfaction Instrument (EPJS); the McCloskey/Mueller Satisfaction Scale (MMSS); the Measure of Job Satisfaction' (MJS); and the Nurse Satisfaction Scale (NSS). The instruments reflect the multi-dimensional nature of the concept of job satisfaction as a general. All the seven emerged tools assess the common aspects of Job e.g., job satisfaction in supervision, autonomy, salary, communication, benefits and rewards, and co-workers. Three of them have been used to assess JS among the nurses such as MJS, MMSS and NSS tools. While EPJS assesses JS among Emergency physicians and JSS assess the JS among social services. The others two, JIG and Withey Job Satisfaction Questionnaire assess the JS as a general construct among different populations.

2.3.4.4.1 Job Satisfaction Survey (JSS) (Spector 1998)

The JSS is a multidimensional instrument that was developed for social services although it can be used for other sectors and has 36 items. It consists of nine sub-scales: supervision, salary, work, communication, promotion, fringe benefits, contingent rewards, operating procedures, and co-workers. The measurement uses a six-point Likert scale, ranging from 'disagree very much' (1) to 'agree very much' (6). Reliability and construct validity were good (see Table 2.8). The convergent validity was established but it did not mention the total score.

2.3.4.4.2 Emergency Physician Job Satisfaction Scale (EPJS) (Lloyd et al., 1994)

The EPJS is a multidimensional instrument. The questionnaire has 79 items, including a global job satisfaction scale. The EPJS measures the following six factors: administrative autonomy, clinical autonomy, resources, social relationships, lifestyle (work/private-life balance) and challenges. It has a seven-point Likert scale, ranging from 'strongly disagree' (-3) to 'strongly agree' (3). The reliability and construct validity are satisfactory, as given in Table 2.8.

2.3.4.4.3 Measure of Job Satisfaction (MJS) (Traynor & Wade, 1993)

The MJS is a 38-item multidimensional instrument which was applied in community nurses. The question is 'How satisfied are you with this aspect of your job?' The MJS measures five factors: personal satisfaction; workload; professional support; salary; and prospects and training. The individuals are asked to indicate their level of satisfaction with five aspects of their job. It uses a five-point Likert scale, ranging from ‘very satisfied’ to ‘very dissatisfied’ for measurement. Reliability and construct validity are good, as shown in Table 2.8.

2.3.4.4.4 The Nurse Satisfaction Scale (NSS) (Ng, 1993)

The NSS measures job satisfaction amongst nurses. The questionnaire is multidimensional and has 24 items. The NSS includes seven factors: administration (support nurses, care about nurses, consult with nurses and nursing goals of administration); co-workers; career; patient care; relation with supervisor; nursing education; and communication. It consists of a seven-point Likert scale, ranging from ‘strongly agree’ (1) to ‘strongly disagree’ (7). Reliability and construct validity are good, as shown in Table 2.8.

2.3.4.4.5 Andrew and Withey Job Satisfaction Questionnaire (Rentsch & Steel, 1992)

This is a unidimensional questionnaire that measures global job satisfaction and has five items. It consists of a seven-point Likert scale ranging from ‘delighted’ (1) to ‘terrible’ (7). The reliability and construct validity are satisfactory (Table 2.8).

2.3.4.4.6 McCloskey/Mueller Satisfaction Scale (MMSS) (Mueller & McCloskey, 1990)

The MMSS is a multidimensional questionnaire that was applied in hospital staff nurses. There are 31 items. The scale measures eight factors: extrinsic rewards (salary, vacation); scheduling satisfaction (e.g. flexible work hours); family/work balance; co-workers; interaction; professional opportunities (e.g. write and publish, participate in research); praise/recognition; and control/responsibility. It is measured using a five-point Likert scale ranging from 'very dissatisfied' (1) to 'very satisfied' (5). Reliability is good, and construct validity is satisfactory, as shown in Table 2.8.

2.3.4.4.7 The Job in General Scale (JIG) (Ironson, 1989)

The JIG is a global job satisfaction instrument and is part of the Job Descriptive Index (JDI) (Smith et al., 1989), and has 18 items. The scale is a three-response choice: a person agrees (yes), a person is not sure (?), or a person does not agree (no). Reliability and construct validity are good, as shown in Table 2.8.

Table 2.8: Comparison of Reliability and Construct Validity of Job Satisfaction Measurement Tools

Instruments	Scales and Items	Population	Reliability (Cronbach's alpha)	Construct Validity (Convergent validity)
1-Job Satisfaction Survey (JSS) Spector (1998)	9 sub-scales: supervision, salary, work and communication, promotion fringe benefits, contingent rewards, operating procedures, and co-workers, 6-point Likert	Social Service	0.91	0.61–0.80
2-Emergency Physician Job Satisfaction Scale (EPJS) Lloyd et al. (1994)	6 factors: administrative autonomy, clinical autonomy, resources, social relationships, lifestyle (work/private-life balance) and challenges, 11 items, 7-point Likert	Emergency Physicians	0.81	0.69
3-Measurement of Job Satisfaction (MJS) Traynor & Wade (1993)	5 factors: personnel satisfaction; workload; professional support; salary; and prospects and training, 38 items, 5-point Likert	Community Nurses	0.93	0.83
4-Nurse Satisfaction Scale (NSS) Ng (1993)	7 factors: administration (support nurses, care about nurses, consult with nurses and nursing goals of administration); co-workers; career; patient care; relation with supervisor; nursing education; and communication. 24 items, 7-point Likert	Nurses	0.84	0.64
5-Andrew and Withey Job Satisfaction Questionnaire Rentsch & Steel (1992)	5 items (not described), 7-point Likert	Heterogeneous	0.81	0.70
6-McCloskey/Mueller Satisfaction Scale (MMSS)	8 factors: extrinsic rewards (salary, vacation); scheduling satisfaction (e.g. flexible work hours); family/work balance; co-workers; interaction; professional opportunities (e.g. write and	Nurses	0.89	0.53–0.75

Mueller & McCloskey (1990)	publish, participate in research); praise/recognition; and control/responsibility; 31 items, 5 point Likert			
7.Job in General Scale (JIG) Ironson (1989)	18 items, and 3 types of responses	Heterogeneous	0.91	0.66–0.80

The highest reliability and validity are for MJS, followed by JIG and JSS, both similar in values. However, these measures assess different aspects of job satisfaction and therefore choice is determined by what you want to measure, as given in the second column of Table 2.8. Sometimes a combination of measures can be used to measure different aspects of job satisfaction, as described in each scale. Insufficient descriptions of the items of scales were found in the scoping review studies in the case of JIG and Andrew-Whitney tools.

2.3.4.5 Scoping Review Q5: What is the application of job satisfaction in health care, nursing and education?

The results of the literature demonstrated that there is a strong relationship between job satisfaction and organisational outcomes. High appreciation and career developments with low work demands stimulate the employee satisfaction and that increases job performance (Jacobs & Solomon, 1977). Job satisfaction and related motivators may vary among various professions, as each profession is unique regarding job demands and descriptions.

Due to the rapid and continual changes in healthcare work and educational settings, a deep understanding of job satisfaction is required here. The problem of turnover intentions could be solved by ensuring employees' job satisfaction. There are some similarities among different categories of healthcare professionals; for instance, in the case of nurses, hospital support staff and other healthcare professionals, social relations at work, with its task requirements, become work incentives, as per Herzberg hygiene factors. Job satisfaction is also important for educators, as their attitudes toward the job influence the learning environment of students. In general, the literature shows that they view their job as difficult, yet rewarding (Dermondy & Bennett, 2008).

Job satisfaction is influenced by numerous factors. However, two have predominantly been studied: personal characteristics and the work environment. Nurses’ job satisfaction is

affected by his/her background, in addition to organisational factors and patient care aspects (Hayes & Bonner, 2010). Ross et al., (2009) reported that newly appointed nurses who spend more time at work have more of a sense of accomplishment, with consequent higher job satisfaction. Higher levels of JS were reported in the case of nurses who provided quality care and who met patients' psychological needs, and those who were able to solve patients' problems and comfort these patients (Ross et al., 2009).

There were several factors that may reduce nurses' JS (Brokalaki et al., 2001). Job stress suggests a discrepancy between role expectations and accomplishment which would certainly decrease JS and may lead to burnout (McVicar, 2003), especially when it is chronic (Jourdain & Chenevert, 2010). Several factors contribute to job stress and burnout among nurses and other healthcare employees, including difficult interpersonal relationships with physicians; facets of patient care; violence and abuse from patients (Murphy, 2004; Arikan et al., 2007); lack of opportunities to participate in ongoing nursing education (Ugur et al., 2007); and lack of support from colleagues, all of which increased job stress. Similarly, a high workload, with no or shorter meal breaks and working overtime or extra-shifts (Bennett et al., 2009), ineffective communication with hospital management, and a lack of support and empathy, are all factors that contribute to job stress (Brokalaki et al., 2001; Murphy, 2004).

Career satisfaction and the success of nursing faculties have been threatened by high job demands, such as a heavy workload and multiple role expectations, together with low resources, such as insufficient time, lack of mentoring, and lack of collegial support (Gazza, 2009; Gerolamo & Roemer, 2011; Gormley, 2010). These stressors can lead to decreased job performance, negative attitudes towards work, lack of motivation, low job satisfaction and eventually detachment from the job (Candela, Gutierrez & Keating, 2012). There was a significant association between low workload and a nursing faculty's intent to stay in academia. People who worked shorter hours per week were more likely to indicate they would remain (Garbee & Killacky, 2008).

Stress and leadership, quality of communication with administrators, and work standards and pride in the quality of their own work, were factors that influenced teachers' job satisfaction (Iwanicki, 2001). In academia, improving educational performance ranks high on the national agenda in the Kingdom of Saudi Arabia, with educators and policymakers focusing on reforming the quality of education through curriculum enrichment and the focus on teacher quality and other related concerns. To develop quality teaching staff, one has to understand the

factors associated with job satisfaction. Indeed, understanding the factors that affect teachers' satisfaction at the workplace is of paramount importance for a successful educational system. A study in Saudi Arabia by Myra et al. (2015) investigated the predictors of JS of faculty members at Al Ghad International Colleges for Health Sciences, Dammam. The researchers assessed the influence of some the factors, such as, pay, quality of performance, the length of time spent at work, relationships, values, as well as age, years of experience, and social life. These factors had significant effects on faculty JS and intention to stay, with salary and quality of performance having the strongest impact.

Despite the abundance of research in the area of JS and related factors among nurses and nurse educators, few studies have been conducted specifically for colleges of health sciences, and even fewer in relation to JS amongst employees working in newly established educational institutions. More research is required in these areas in order to identify the predictors of JS among employees. This, in turn, will help to ensure that these colleges achieve their aspirations of quality and excellence as employers.

2.3.5 Discussion

This scoping review was conducted to identify the issues around job satisfaction. The review was conducted according to the JBI guidelines seemed to be workable and appropriate for this scoping review. Search terms were created to help through the databases search. Titles, abstracts and full text were screened, and papers included if they met the inclusion criteria, and the final number of studies was 50 papers.

Five review questions informed the review, and these questions were addressed. Regarding the first question, studies identified and discussed different definitions of JS, based on three main perspectives: the individual will view job satisfaction from the perspective of both as a person and also as a worker or employee, with the third perspective being from the organisation. Job satisfaction from a personal perspective is about how an individual feels about and appraises their job. Job satisfaction is initially related to how a job makes an individual feel or meets their material, emotional and psychological needs. Additionally, it refers to an individual's psychological reaction towards work and how the person emotionally appraises their work (Aziri, 2008).

From an employee perspective, definitions are a bit different and were extended to consider the balance between positive and negative views of the job itself which in turn led to

either feelings of satisfaction or dissatisfaction. Job satisfaction was viewed in terms of like or dislike, and a sense of efficiency and accomplishment at work (Armstrong, 2006). From an employer perspective JS is used as a way of assessing outcomes and performance in relation to productivity and staff turnover. When JS became linked with these outcomes, employers became more interested in this concept. Definitions were further extended for JS to be used as an indicator of a positive work environment where people enjoy working. Job satisfaction is an important factor that determines the efficiency and effectiveness of organisations, and hence it is important to keep employees satisfied with their jobs, using all possible strategies (Azoury & Doumit, 2003). The organisations used job satisfaction of their employee as an evaluator to their outcomes for example if the organisation needed to evaluate efficiency, performance, and employee intention to stay that required to assess their satisfaction. Job satisfaction is one essential indicator to predict intention to remain (Lundgren & Segesten, 2005).

As regards the second review question, the four concepts emerged: job satisfaction as an attitude, as an affect, as an expectation, and as a belief system (Abbas et al., 2015). Attitude aligns with the notion that a job is liked or disliked and will lead an individual to act in a certain way. Both concepts of attitude and affect are correlated with each other, meaning each one contributes to the forming of employees' job attitudes. Hence, affect becomes a factor to reach attitude. There is a relationship between job affect and job behaviour, meaning that emotions influence employees' responses or reactions towards work (Onur Bodur et al., 2000). Personality traits of positive and negative affect will influence an individual's appraisal of job satisfaction i.e. someone with negative effect is likely to report low job satisfaction. Thus, this reflects the emotional or psychological dimensions of job satisfaction (Hulin & Judge, 2003).

If a job falls short of a person's expectations, then JS is likely to be low. How an individual appraises whether a job meets their expectations may be influenced by personality, or work-related factors. People differ in their degree of optimism or pessimism in their appraisal of job quality with those who are optimistic are likely to be more positive in their appraisal (Ravari et al. 2012). However quantifying actual and realistic expectations are difficult as they are unobservable. For more explanation, an optimistic worker might have a good feeling and expectation toward work; in contrast the pessimistic worker can anticipate a negative expectation, and that might not reflect a realistic assessment of work (Groot & Oosterbeek, 1994).

The last concept of the belief is very general and broadly reflects the concept of work values. Belief or value is an active concept, so employees intentionally need to seek to achieve JS through their own positive actions. This “intentional” aspect of JS is related to the value-attitude-belief system, which makes work meaningful and is determined by influencing employees' emotions, attitudes, and performance (Maio & Olson, 1994). Reviewed studies revealed that there was a significant association between high work value and positive job outcomes, as such decreasing intention to leave (Hegney et al., 2006; Froese & Xiao, 2012).

The scoping review addressed question three concerning the JS theories by explaining eight theories and models of job satisfaction. All of them focused on motivation, or achievement or reinforcement. All the theories and models are similar in that all suggest that motivation is the major aspect that influences JS and that the process of motivation and satisfaction is considered to be continuous. There were various secondary focussing. The theories of Vroom and Hackman focused on goal achievement in order to feel satisfied (Luthans, 2005). The employees are motivated to work to achieve a goal if they believe that that the goal is valuable and there is the expectancy or belief that what they do will help them to accomplish their goals. This suggests that goal accomplishment should be directed to better work performance through positive rewards. Others suggest that JS as a basic need in life, such as Maslow’s theory, or a basic need but with a feeling of achievement (McClelland, 1961). Skinner’s theory, and Porter and Lawler, focus on external factors such as reinforcement factors or rewards that stimulate job satisfaction. The Herzberg theory is a very specific theory that distributes the factors that contribute the dissatisfaction to hygiene, and motivation factors that contribute to satisfaction (Kim, 2004). Herzberg’s theory is interesting precisely because it is simple and general, but in this context, it was not accurate in predicting a clear explanation of job satisfaction factors. Applying one of these theories and models relies on how the JS concept defined and perceived as well as based on the main purpose of the study.

Regarding question four, there were seven tools that measured JS; some as a broad concept and some of them among specific populations, and specific aspects such as pay, autonomy, opportunities, benefits, supervision or work colleagues. On the whole, psychometric adequacy was variable with the reliability and validity of all the tools ranging from satisfactory to good. Some tools did however perform well: Measure of Job Satisfaction’ (MJS), Job in General Scale (JIG); and the Job Satisfaction Survey (JSS). It is important therefore to recognise JS as a multi-dimensional concept and choose a tool that is most appropriate to what

is being measured. It may be that more than one tool should be used if different perspectives of job satisfaction are being assessed.

The wide-ranging applications of JS were addressed by reviewing question five. The foundation of JS arose as essential in all work environments including healthcare, education, and work organisations. Job satisfaction can be beneficial to individuals as job satisfaction is linked with improved psychological states and wellbeing, as well as a feeling of achieving the main goal (Brokalaki et al., 2001; Murphy, 2004). Job satisfaction of employees across all the sectors performs as a motivator to increase work performance and improve the organisation's outcomes. When employees are threatened by high job demands, such as heavy workload and unclear roles, together with low resources such as low autonomy, lack of manager support, and lack of collegial support (Gazza, 2009; Gerolamo & Roemer, 2011; Gormley, 2010), this can lead to low job satisfaction, decreased job performance, and ultimately a detachment from a job (Candela, Gutierrez & Keating, 2012). This can be manifested by employees indicating that they are likely to leave a job as was demonstrated by Garbee and Killacky, (2008) who found a significant correlation between workload and a nursing faculty's intent to stay in academia (Garbee & Killacky, 2008). Specifically, nursing faculties reported that increasing workload, led to lower satisfaction and that ultimately decreased their intention to stay in academia (Gazza, 2009; Gerolamo & Roemer, 2011; Gormley, 2010).

2.3.5.1 Strength of Scoping Review

This review was conducted using defined approach following the JBI guidelines which provided a rigorous systematic structure and a good basis for developing the empirical work further. The 50 emerged papers answered all the review questions and gave a deeper understanding of JS. The review highlighted a range of different definitions, associated factors and models, and the link between JS and intention to remain was demonstrated. However JS is not the only factor that can enhance the intention to remain in work, and other factors that emerged include workload, role conflict (job demands) and lack of job resources, such as support and empathy. Job stresses, such as burnout, emerged as important factors besides job satisfaction which influenced the organisation's outcomes. This review identified various reliable tools to measure the JS that can be applicable in the context of this study. Regarding the limitions will coverd in the review gaps section.

2.3.6 Conclusion

This scoping review evaluated the evidence on definitions, concepts, theories, measurement tools and the impact of job satisfaction in organisations, especially in healthcare and nursing. The results showed inconsistent definitions but with some commonalities. The concepts on which these definitions were based, and the theories formulated, also laid differential stress on different aspects of the employees, jobs, workplace environments and organisations. There were a range of good measurement tools but that they operationalised JS based on different aspects of this multi-dimensional concept. The measurements had differing variables and items, and the determination of used lay in the focus, psychometric properties, and the context of the research.

The reviewed studies discussed many factors that impacted job satisfaction. The factors could range from aspects like pay, work relationships, leadership, flexibility, and low demands and pressures from the job. Reducing job demands may increase the level of job satisfaction along with high job resources and personal resources might be an effective way to reduced intention to leave. These results might inform the empirical work on how to assess the work-related factors that influence personal and organisation outcomes. The importance of job satisfaction to assess and improve the performance of employees in healthcare and educational organisations were also highlighted (Bonner, 2010).

2.3.6.1 Review Gaps

A secondary goal of conducting this review was to guide future empirical study or identify any research gaps to conduct another review or systematic review, in addition to the main aim of gaining a deeper understanding of JS. This scoping review identified broad studies in the database without appraising the quality of this evidence. Therefore, this scoping review cannot determine whether certain studies give robust or generalizable results (Arksey & O'Malley, 2005). In addition, to understand the association between the emerging dependent or independent factors and the prediction of JS, a systematic review is need with a clear framework and structure to guide these associations. One person (the researcher) reviewed the paper, and thus, some papers may have been missing. Most of the articles included were from a Western context, so there is still a gap in understanding the research issue within the context of the problem. Therefore, in the next chapter of the systematic review, the quality of the included studies will be assessed, and the problem will be examined in both Western and Arabic

literature.

2.3.7 Summary of recent evidence (post 2016)

A number of researchers have recently focused on the concept of JS, including Dhamija, et al (2019), Sahito and Vaisanen (2017), Maghsoodi, et al (2019), Polatcan and Cansoy (2019), and Sayani (2020). In general, these recent studies not just focused on the factors influencing JS but have also appraised and evaluated the effectiveness of these factors on increasing JS. In addition, recent studies have tried to create an effective and workable model for JS based on studying and evaluating all previous models of the job satisfaction and motivation.

Job satisfaction is observed as being strongly associated with quality of work life factors of employees (Dhamija, et al., 2019). This study found that an unconducive work environment has a negative association and influence by reducing job satisfaction; the researchers suggest that organisations should realise the importance of increasing the quality of work environment by initiating, for example, exercise routines to reduce stress, solve common problems for employee, and provide better learning opportunities in a healthy, informal atmosphere within the work environment. The recent work of Maghsoodi, et al (2019) focussed on better understanding of effectiveness of the environmental factors that contribute to better job satisfaction. They proposed a practical and accurate approach to evaluating and appraising the factors that influence JS. This approach seem to be workable and was applied in multinational and contexts.

Moreover, to find an effective model to understanding JS, Sahito and Vaisanen (2017) compared theories of JS and motivation to create a new model. The factors included in the model were the professional requirements of employees and the organisational goals. The model was claimed to be useful to gain first-hand knowledge of the employees' level of satisfaction, motivation and performance if rolled out across an organisation. Through the assessment of the learning system, it was observed that a strong schooling structure determined teachers' job satisfaction including support, trust, justice and communication, and the belief in professional competence and psychological well-being (Polatcan and Cansoy ,2019). Moreover, gender and position, promotion, appreciation, good salary, and remuneration were found to significantly increase the level of JS and advancement (Sayani, 2020). In summary, recent research has found that management structures, other organisationl factors, attributes

associated with employees (such as, renumeration, position and psychological attributes) and work conditions are associated with JS.

Chapter Three-Phase 1: Systematic Review

3.1 Introduction

3.1.1 Background - Problem Statement (PICO)

Universities across the world strive to make a difference to the educational performance of their students and academic staff, as a high-quality teaching faculty is the cornerstone of successful education. In Saudi Arabia there is a focus on reforming the quality of higher education, including at Colleges of Nursing (Kumar, 2016), and academic staff are the key resources to achieve this aim. Staff members need to adapt to changing environments and cope with a range of roles. However, this is occurring at a time when Higher Education (HEIs) Institutions face difficulties in recruiting and retaining staff.

As highlighted in the previous chapter, the findings from two scoping reviews suggested that a number of aspects may contribute to individual performance and organisational outcomes. Work environments promote and contribute to successful organisational outcomes (e.g. low turnover intention and actual turnover figures, alongside good job performance). There were factors identified including job demands (job workload, work pressure, role conflict and emotional demands). There are also job resources, such as managerial and colleague support, autonomy, performance feedback, job security, salary, and role clarity, with good interpersonal relationships and sharing in decision-making, which point towards improved organisational outcomes. Job resources provide a strong positive impact on work performance outcomes and enable the engagement of academics at higher education institutions (Bakker et al., 2013).

When higher education fails to provide sufficient job resources, such as organisational support, growth opportunities, advancement opportunities, and good payment, it has the potential to lead to negative consequences which include staff withdrawal and reduced motivation/commitment (Rothman et al., 2006). The scoping reviews in Chapter Two have shown that personal resources, such as emotional intelligence, can be learned, and adopted by individuals. This means that when organisations train their employees to develop their personal resources, they can acquire new competencies. These new competencies can help staff to

undertake their daily job demands and tasks (Bakker & Demerouti, 2014), creating an increasingly positive reaction in HEIs.

A work environment that is perceived by an employee as being positive may improve an individual's job performance (Salanova & Peiró, 2005). Individuals working in a positive environment are likely to have a higher sense of commitment, ownership, autonomy, and competence that, in turn, improve outcomes. However, negative work environments with high demands, such as energy driven processes, work pressure, emotional demands and changes in tasks are more likely predictors of negative problems, which can lead to sickness and absences, negative engagement, burnout, exhaustion, poor health, and negative organisational outcomes (Bakker & Demerouti, 2014).

The first scoping review identified emotional intelligence (EI) as a potentially important personal characteristic/resource within the workplace (Hunt et al., 2013). EI is thought to have a positive influence on an individual's ability to cope with environmental demands and pressures, and ultimately improve performance (Landy, 2005). This may be viewed as a personal resource when dealing with work-related problems and pressure and may be important when looking at academic performance and outcomes in HE. Importantly, EI can be measured and acquired, resulting in enhancing the successful work communication that leads to stress tolerance, feeling more satisfied and engaged with work (Trivellas et al., 2013).

Through the second scoping review, JS was identified as an important issue that may play a critical role in an individual's performance and well-being (Dugguh & Dennis, 2014). According to Vroom (2004), JS is the essential component for employee motivation and encouragement towards better performance. Job satisfaction is a reaction directed towards the work environment; it is a primary emotional outcome (Chaudhary & Barua, 2011). The presence of specific demands (i.e., workload) and the absence of personal resources (i.e., emotional intelligence) and other job resources (i.e., organisational support) predict burnout, poor job satisfaction, absenteeism, and a reduction of organisational commitment and outcomes (Maslach & Leiter, 2008).

Higher Education or HE in Saudi Arabia is developing quickly and institutions seek to develop and establish high quality and excellence. However, this must be achieved by balancing work environments with faculty members' expectations and performance. A lack of resources (both in job and personal) with high demands (mental, emotional, and physical) has a negative impact on job satisfaction, which in turn leads to poorer organisational outcomes

(Britiller & Reda, 2015). The two scoping reviews of EI and JS highlighted that much of the work in this field was mainly centred around a Western culture, based on a range of theoretical models. Minimal Arabic literature supported findings from Western literature. In particular, the Job Demand Resources model was one that was often applied, as it functioned in understanding the structure towards greater job performance (See Figure 3.1, adapted from Demerouti & Bakker, 2007).

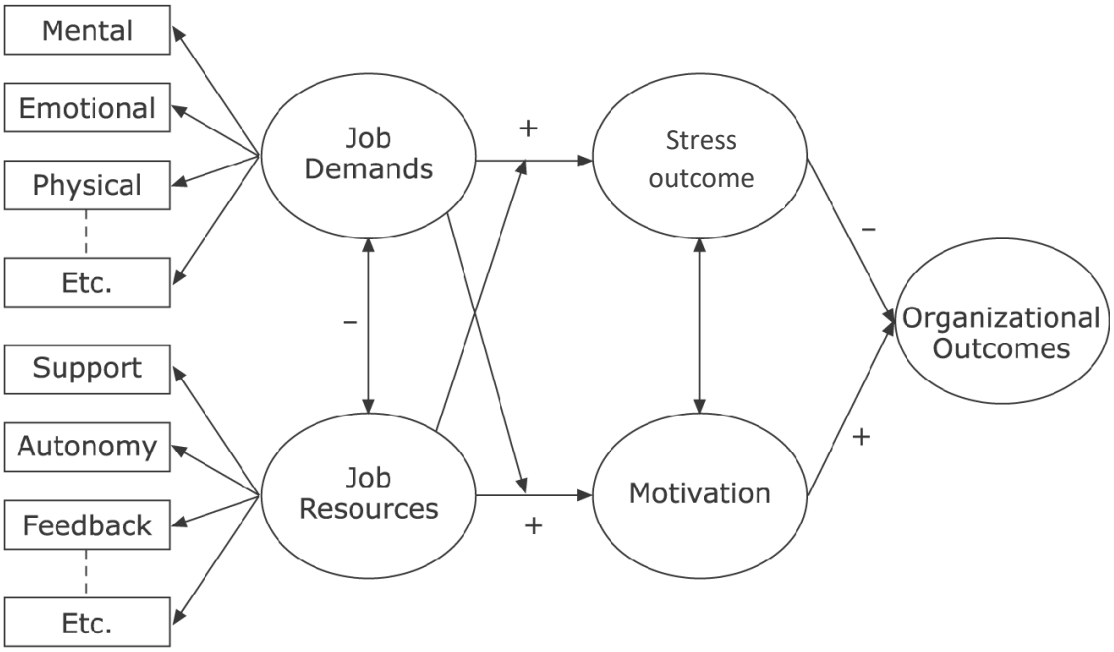


Figure 3.1: Two Different Underlying Psychological Processes Play a Role in the Development of Job-related Stress and Motivation (Demerouti & Bakker, 2007)

The two scoping reviews highlighted two areas of EI and job satisfaction that affect the work environment in HEIs. However, it is likely that there are other important areas, thus making it imperative to systematically identify the work environment (e.g. job demand, job resources) and personal resources (e.g. EI, self-efficacy) that are associated with organisational outcomes (e.g. turnover intention, turnover and job performance) in the HE of academic health science faculty.

3.1.2 Aim of Review

The aim of the current review is to systematically identify the job demands and job resources/personal resources which are associated with stress outcomes (e.g., job satisfaction,

burnout), work engagement and motivation, and organisational outcomes (e.g., turnover intention, turnover and job performance) in academic staff in HE. The review examines issues in both Western and Arabic literature.

3.1.3 Literature Review Questions

The literature review will address the following research questions:

1) What are the job demands faced by the academic health science faculty?
    a. In general;
    b. Within the Middle East; and
    c. In Saudi Arabia.
2) What are the personal resources used by the academic health science faculty?
    a. In general;
    b. Within the Middle East; and
    c. In Saudi Arabia.
3) What are the job resources used by the academic health science faculty?
    a. In general;
    b. Within the Middle East; and
    c. In Saudi Arabia.
4) What is the association between job demand (JD), job resources (JR), and personal resources (PR) within stress outcomes (SO), work engagement (WE)/commitment and organisation outcomes (OO)?
5) Within this identified literature, what are the key theoretical approaches?
6) Within this identified literature, how have the key concepts (JD, JR, PR, SO, WE, OO) been formulated:
    a. In terms of their operationalisation?
    b. In terms of their psychometric properties (including validity and reliability)?

3.2 Methods

3.2.1 Methodology

To address the above questions, a systematic review of the literature was conducted. Literature and knowledge are continually evolving, as reviews and research are assessed and evaluated on a continuous basis. Thus, the systematic review synthesises the results of multiple primary studies related to each other by using strategies that reduce biases and random errors (Moher et al., 2009). In this review, the Population, Interventions, Comparisons and Outcome

(PICO) method has been used to formulate the research questions. The PICO framework is considered to be one of the best research methods utilised to structure research questions and search approaches in reviews (Schardt et al., 2007).

Table 3.1: The PICO Framework

PICO Framework	
P	Population: All academic health science professionals.
I	Intervention: Exposure to work environment (job resources, job demand)
C	Comparator: Comparing General HEI setting, Arabic and Saudi HEI settings.
O	Outcome: Stress outcome, Work engagement, Organisational outcome.

3.2.2 Inclusion and Exclusion Criteria

The inclusion criteria are the population of academic health science professionals. Included in the search process are studies that incorporate identified independent (job demands, job resources, personal resources) and dependent variables (stress, motivational and organisational outcomes).

The exclusion criteria for this research included studies that do not pertain to academic health science or those who do not have a faculty role. In addition to this, grey literature and unpublished research were excluded from this study. The studies will be underpinned by a theoretical approach or framework; while studies may be qualitative, quantitative, or mixed method, and written in English or Arabic. To ensure that contemporary literature is accessed, and to reflect the changes in the Saudi HE system for nursing when Colleges of Nursing became independent systems and buildings, the review will access articles published within the last seven years in order to review the most recent literature available.

Table 3.2: Eligibility Criteria

Inclusion Criteria	Exclusion Criteria
Studies that include academic health science professionals (e.g. nurses, doctors, dentists, pharmacists, AHPs (biomedical technologists, dieticians, physiotherapists, OT, speech and language therapists, dental health specialists, radiologists, health educators); and Participants must have a faculty element to their role (i.e. have a joint role or formal contractual arrangement).	Studies that do not include academic health science participants and/or do not have a faculty role, i.e. no formal joint role or formal contract.
Studies that cover the concepts of interest, i.e., include job demands, job resources, personal resources, work environment and individual emotional and organisational outcomes; and Must include a minimum of one of the antecedents, i.e. job demands/personal/job resources and one other: either work environment, individual emotional or organisational outcome.	Non-published studies. If the studies include one predictor only, without any outcomes. If the studies include only one outcome, without any predictor.
Must relate to, or state, a key theory.	Lay person internet sites. Non-regulated/academic sites. Anecdotal sites. Theoretical studies (no specific theories).
Studies written in English or Arabic.	Studies written in languages other than English or Arabic
Studies of qualitative and/ or quantitative research design. Reviewed articles	Opinion pieces, editorials.
Articles published between 2010 and 2016.	Studies published before 2010.

3.3 Search Strategy

3.3.1 Search of Databases

Different databases were accessed using key search terms (Mesh words), to reduce potential bias and allow access to a wide range of literature (Fleeman et al., 2011).

Table 3.3: The Number of Titles and Abstracts Retrieved from Each Database

Database	CINAHL Plus	MEDLINE	NEXIS	ASSIA	TRIP	Web of Science	Cochrane	Total
Number	155	274	15	15	4	31	7	501

3.3.2 Manual Search: Use of Reference Lists from Identified Articles

Apart from searching online databases, non-electronic sources such as reference lists of known articles were also utilised and referred to. These were managed manually.

3.3.3 Keyword Search Terms

Concepts related to Population, Comparator (Job demands), Comparator (Job Resources), Comparator (Personal Resources), Personal outcome (Stress Outcomes), and Outcome (Organisational Outcomes) were thoroughly researched under detailed terms (please see Appendix 3).

3.3.4 Screening Titles, Abstracts, Full Articles

All identified titles were screened along with abstracts and full articles against the inclusion and exclusion criteria (see Table 3.2) in order to minimise bias. Subsequently, two independent reviewers (supervisors) each reviewed half the titles and abstracts, and the results were compared to identify levels of agreement. Where there was no agreement between the two reviewers, a third opinion was sought. All the information was stored in Excel to facilitate the screening process. Thereafter it was possible to conclude the final number after screening the abstracts that determined whether the full article should be obtained.

3.3.5 Assessing the Quality of the Literature

Each full text article was quality appraised using the Quality Appraisal Tool for Studies with Diverse Designs (QATSDD) (Sirriyeh et al., 2011). QATSDD was chosen to standardise

and increase rigour, as its 16 reporting criteria can be applied to both qualitative and quantitative study designs. The criteria for appraisal encountered are related to the title, research questions, aim, design, and data collection (see Appendix 4). The reliability and validity of this tool has been demonstrated; test-retest and inter-rater reliability were assessed and ranged from good to substantial (kappa ranging from 0.698 to 0.901) (Sirriyeh et al., 2011).

To test the robustness of the quality appraisal process, the researcher appraised 6 articles. Three articles were appraised as good and 3 as weak. These articles were then independently appraised by supervisors and the results compared.

3.3.6 Extracting the Data

A word file was created to facilitate data extraction. This was based on the research questions and the following variables:

- Demographic characteristics;
- Study design;
- Details of the study sample;
- Details of study methodologies;
- Data collection method(s);
- Method of data analysis;
- Relation of factors between each other;
- Type of tool and validity and reliability;
- Theoretical framework;
- Effect of work environment (job demands, job resources, personal resources);
- Individual outcome;
- Organisational outcome;
- Comments or limitations of the studies.

An initial data extraction table was tested on two articles, and then independently checked by supervisors to ensure that the relevant data was extracted (see Appendix 5).

3.4 Results

The selection process was presented using the PRISMA Flow Diagram 2009 (see Figure 3.2). Eight hundred and thirty titles were retrieved from the search and a further 60 from

other sources (Google Scholar and World Cat, alongside websites related to the keywords identified); after removing the duplicate articles, 501 remained (see Table 3.3), and these abstracts were retrieved. The researcher reviewed all of these and the second and the third reviewers (supervisors) each reviewed half. Four hundred and thirty-three did not meet the inclusion criteria. Therefore, sixty-eight abstracts, (53 abstracts having consensus of 2 reviewers and a further 15 included after review by a third reviewer) remained and full articles retrieved. The final number included in the review, after screening the titles and abstracts and obtaining the full text, was 21 articles (13 quantitative, 3 qualitative and 5 mixed methods). The main reason for rejection at this stage was lack of a defined theoretical approach.

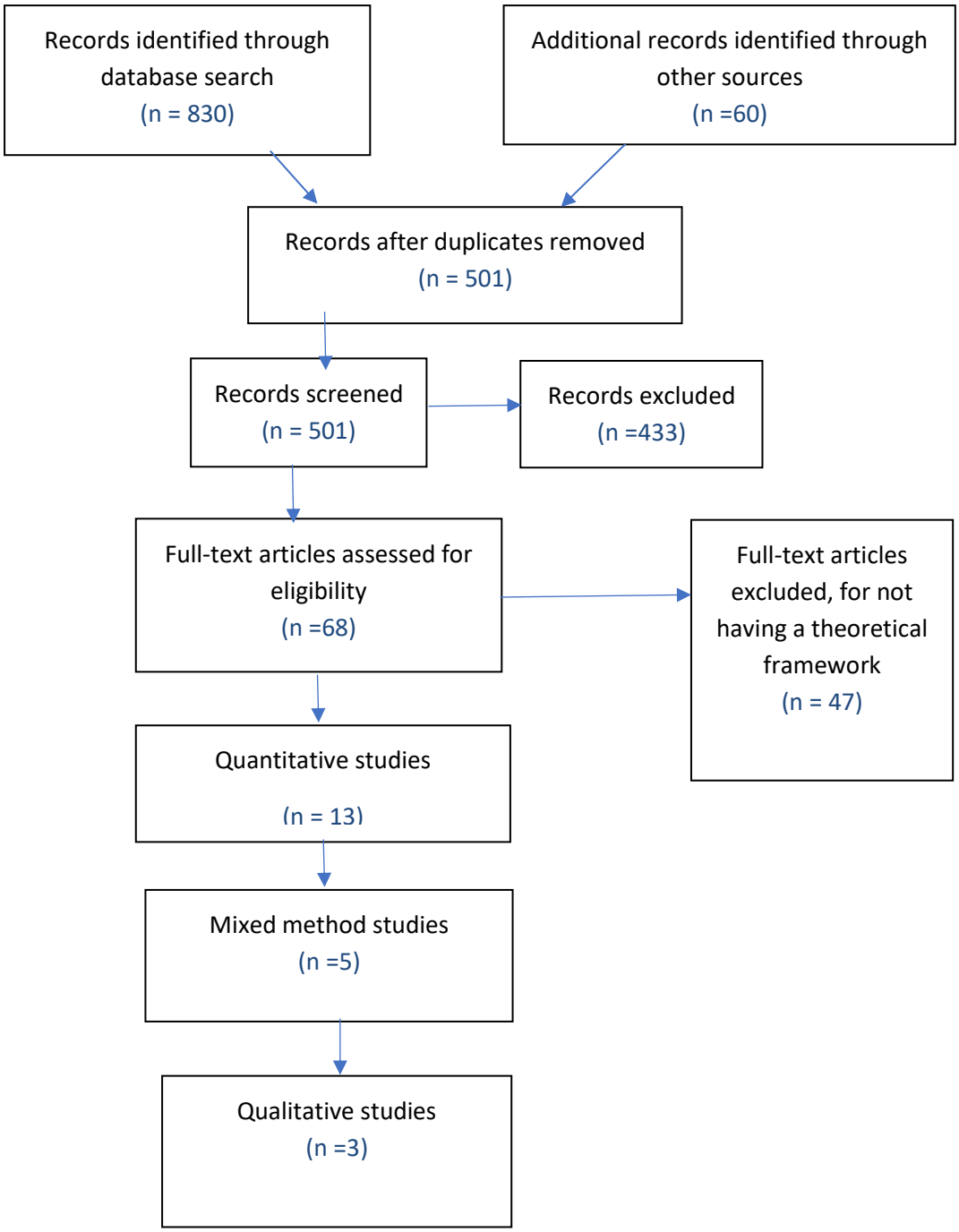


Figure 3.2: The Process of Database Search, Results and Selection of the Studies Included in this Review (Prisma)

3.4.1 Quality Appraisal Results

The quality of the appraisal process had been tested prior to this review by comparing the results of 6 articles appraisals undertaken separately by the researcher and the supervisors. These were very close and therefore suggested that this approach to quality appraisal was

appropriate. After the appraisal of the 21 articles using the QATSSD tool, the percentage scores ranged from 52.38% to 83.33%.

Table 3.4: Quality Appraisal Results

N	Articles	Quality Appraisal	N	Articles	Quality Appraisal
1	Baker et al. (2010)	61.90%	12	Tourangeau et al. (2013)	52.38%
2	Lane (2010)	76.19%	13	Derby-Davis (2014)	69%
3	Navarro et al. (2010)	54.76%	14	Guan et al. (2014)	83.33%
4	Al-Hussami et al. (2011)	76.19%	15	Isaac et al. (2014)	57.14%
5	Birx et al. (2011)	64.28%	16	Tourangeau et al. (2014)	57.14%
6	Dankoski et al. (2011)	83.33%	17	Winefield (2014)	69.04%
7	Berent et al. (2011)	54.76%	18	Yamani et al. (2014)	59.52%
8	Mahoney et al. (2011)	64.28%	19	Berg et al (2015)	80.95%
9	Del Líbano (2012)	54.76%	20	Wang & Liesveld (2015)	64.28%
10	Gutierrez et al. (2012)	54.76%	21	Watanabe (2016)	69.04%
11	Tourangeau et al. (2012)	52.38%			

The selected articles represented a range of countries (see Figure 3.3).

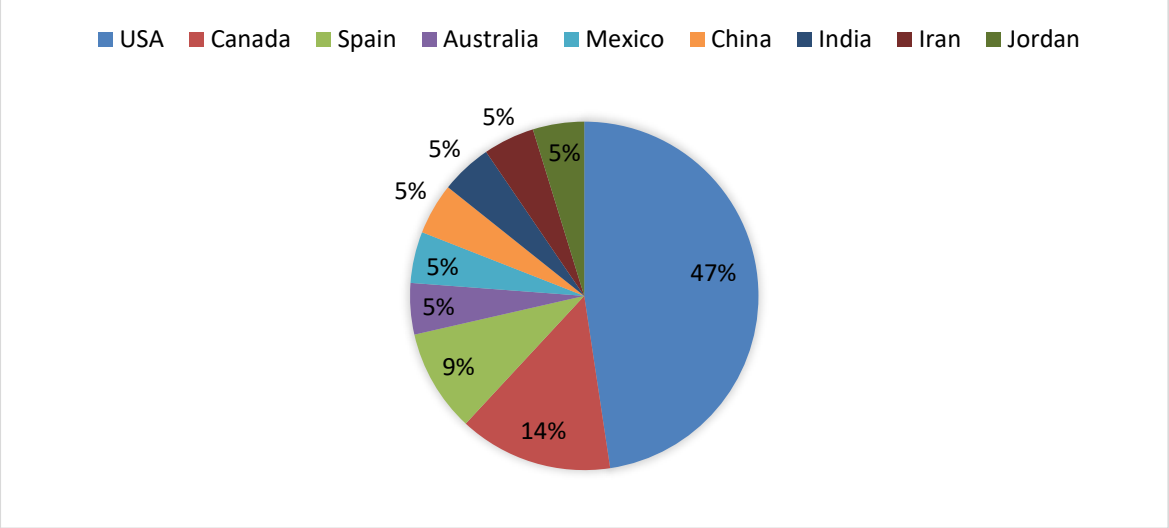


Figure 3.3: The 21 Studies Identified from the Literature Search based on the Country where the Study was Conducted.

3.5 Study Findings

The conclusions and findings for these twenty-one studies are summarised in Appendix 6. The following sections will now address the research questions of the study.

3.5.1 Research Question 1: What are the Job Demands faced by the academic health science faculty, A- In general, B- In the Middle East, and C- In Saudi Arabia?

Job Demands (JD) were discussed and analysed in nine studies as potential variables in predicting personal and/or organisational outcomes (Lane, 2010; Navarro, 2010; Al-Hussami et al., 2011; Berent, 2011; Del Líbano, 2012; Tourangeau et al., 2014; Winfield, 2014; Berg, 2015; Watanabe, 2016).

A- In general:

Workload was the most commonly identified job demand and was discussed in three studies (Navarro, 2010; Tourangeau et al., 2014; Berent, 2011). Workload was identified from different perspectives in the three studies and could become 'overload' when a faculty member had limited time to complete excessive work (Navarro, 2010), or the workload was perceived as unmanageable (Tourangeau, 2014), and stress was identified as a consequence of this. Workload could be conceptualised also as a balance between teaching, administrative responsibilities and research work (Berent, 2011). A decreasing workload (flexible schedules, more vacation time, lighter teaching loads and job sharing), or a workload that was perceived as manageable, could encourage faculty members to remain in academia (Tourangeau, 2014). In the above studies, measurement of workload tended to rely on subjective measures.

Work pressure was identified in the literature as a job demand and defined as when an individual rushes to do his/her job and is found to give a negative result on job outcomes (Winfield, 2014). This is essential because excess work pressure can have a negative influence on an individual's mental health as well as their performance at work.

Hours of work was described as the main job demand in two different studies (Watanabe et al., 2016; Lane 2010). Lane (2010) defined 'long hours' as those that involved completing work with a perceived lack of income, particularly in comparison with other comparable groups of staff. Long hours were also found to affect intention to remain and family life (Watanabe et al., 2016). Long working hours were one of the requirements that was supposedly expected by the faculty; the academics should have the skills to manage their time.

Workaholism was defined as “the tendency to work excessively hard in a compulsive way” (Schaufeli et al., 2008, p. 204). Excessive working has the potential to pose negative personal consequences on family life, which in turn influences work outcomes. Hence, workaholism is considered to be a job demand which has a negative effect on work outcomes in academia by decreasing job performance (Del Libano, 2012).

The lack of role clarity includes role conflict and role ambiguity. These two aspects of a lack of role clarity were identified as when the role was not clear for the employee or when the employee was given a role other than what was specified in the original job description. Lack of role clarity was regarded as creating confusion for faculty members and putting pressure on them to accomplish their job objectives while also altering the organisation's outcomes (Berg, 2015). Organisational policies were discussed as job demands when these policies were vague and inconsistent (Lane, 2010).

B- In the Middle East:

Regarding studies from the Middle East, only one (in Jordan) discussed workload as a job demand (Al-Hussami, 2011). In this study, this was seen as influencing the work positively as compared to how workload is viewed in the Western studies. The Arabic literature found workload was positive, and that it may motivate the outcome and increase employees’ commitment.

C- In Saudi Arabia:

None of the studies in the literature review showed any results in relation to Saudi Arabia. To summarise this, four studies utilised workload to describe job demand, while three studies assessed job demand in relation to hours of work or excessive work (workaholism). Nevertheless, only Berg (2015) discussed the conflict of roles or role interaction. One study described job demands in relation to inconsistency of organisational policies (Lane, 2010) and work pressure (Winfield, 2014). The reviewed literature was almost entirely based within a Western culture and the one Arabic article demonstrated different findings.

3.5.2 Research Question 2: What personal resources are used by the academic health science faculty, A- In general, B- In the Middle East, and C- In Saudi Arabia?

There were 13 studies in the literature which used PR as the main factor to predict work outcomes (Lane, 2010; Navarro, 2010; Baker et al., 2011; Berent, 2011; Birx et al., 2011;

Mahoney et al., 2011; Del Libano, 2012; Gutierrez et al., 2012; Yamani et al., 2013; Derby-Davis, 2014; Issac, 2014; Tourangeau et al., 2014; Watanbe, 2016).

A- In General:

For this research question, a range of personal resources emerged. These included work relationships (Lane, 2010; Birx, 2011; Tourangeau et al., 2014), love and enjoyment of work (Isaac, 2014; Lane, 2010; Berenet, 2011), personal characteristics and perceived personal competence (Derby-Davis, 2014; Berenet, 2011; Navarro, 2010), work self-efficacy (Del Líbano, 2012; Issac, 2014), psychological empowerment (Bakker, 2011; Mahoney, 2011), emotional family work support (Watanabe, 2016), and work value and personal organisational fitness (Gutierrez, 2012). These are discussed in detail below.

Work relationships were discussed as a concept of personal and professional resources (Lane, 2010; Birx, 2011; Tourangeau et al., 2014). There was a lack of clarity around the definition of work relationships, besides that described by Lane (2010). From responses to open-ended questions, Lane categorised these in terms of whether work relationships were positive and/or friendly, or those that were difficult. When asked, faculty members were, on the whole, satisfied with their work relationships and described these in terms of being respectful, fair, open-minded and supportive. Colleague and mentor support was seen as important by Tourangeau et al. (2014). Seventy per cent of the participants in the study by Tourangeau et al. (2014) reported having a positive work relationship.

In addition, Birex (2011) found that when communication was improved, the faculty could accomplish more than could be achieved through solitary work. In this study, five themes were identified to operationalise and assess the communication in team building through a retreat programme: getting to know each other better; seeing commonalities and differences; spending time together; developing trust; and working as a group (Birex, 2011). Respectful, trusting and supportive relationships helped the individual to reach work goals successfully.

Love and enjoyment of work is a good parameter of a positive personal resource in academia, when individuals have passion, excitement and are involved in work. It was about how the faculty felt about the teaching process. Most nurses within the faculty enjoyed their jobs and felt excited working with students, which was a good reason to stay in academia. A few of the faculty members had negative feelings when dealing with difficult students (Lane, 2010). Isaac (2014) developed a qualitative study that conducted semi-structured interviews

with a sample of 34 faculty medics to understand the factors that affected the physicians in an academic environment. Love for the job was an intellectual skill to develop the faculty's abilities (Berenet, 2011).

Personal characteristics and perceived personal competence were categorised as personal resources by Derby-Davis (2014), Berenet (2011) and Navarro (2010). Derby-Davis (2014) identified personal characteristics such as age, level of education and experience in work as a personal resource. It has been argued that management skills competency was one of the most prominent factors as a reason to make the decision to remain in higher education (Berenet, 2011).

Perceived personal competence was generally understood to be the extent to which one was capable of achieving his or her desired goals or objectives and was tested by Navarro et al. (2010) when proposing a theoretical model for the mediation of its effect in relation to stress in university faculties. He identified perceived personal competencies as personal variables that mediate the appearance of stress (i.e. coping strategies, locus of control, perceived efficacy, optimism, feelings of competence, etc.). Personal competence helped to predict positive outcomes in academia.

Self-Efficacy was the essential part of Del Líbano's (2012) study, specifying it as an example of a personal resource being generally linked to self-confidence. This is related to an individual's sense of ability to control and impact the environment successfully .Self-efficacy is important as it influences how well individuals are able to handle work stress and professional responsibilities (Del Líbano, 2012), and were also an important consideration in developing problem-solving skills (Isaac, 2014).

Psychological Empowerment or Emotional Labour was defined as the management of feelings to create an observable facial and bodily display which led to positive emotional and organisational outcomes (Bakker, 2011; Mahoney, 2011). This does not only influence one's interpersonal skills but also plays a role in stress management and building resilience in a professional setting (Chong, et al., 2020). Emotional family work support was investigated as a personal resource and was identified as the ability to balance work and family roles that can impact one's work providing stress reduction, but only when family members are supportive. Also, it was helpful for understanding a faculty member's intention to leave academia (Watanabe, 2016).

Work value and personal organisation fitness was identified as the similarities between individual and organisational values which can lead to levels of effective and normative commitment (Gutierrez, 2012). A good fit may be complementary, where one provides what the other requires, or is supplementary, in that both parties share the same characteristics.

B- In the Middle East:

EI was the only personal resource identified in the Middle East studies. In a cross-sectional, Iranian study by Yamani et al. (2013), a self-management component identified in Mayer and Salvory's model was the one that most affected the medicine faculty members' emotional outcomes. Faculty members with high EI had decreased job stress. While EI can be educated, it can be anticipated that stress can be decreased through teaching faculty members skills of emotional intelligence.

When the 13 international studies and the Middle Eastern study in Iran were compared, it was shown that all the international studies used one or two components of EI as a personal resource for example, self-efficacy. While in the Middle Eastern study, EI was used as a comprehensive personal resource that included all the terms which were identified under the umbrella of EI.

C- In Saudi Arabia:

In the review, no studies were from Saudi Arabia in relation to personal resources. In conclusion, work relationships were mentioned in three studies (Lane, 2010; Birx, 2011; Tourangeau et al., 2014). Enjoyment and love of work was identified in three studies (Lane, 2010; Isaac, 2014; Berenet, 2011). Personal characteristics and perceived personal competence were categorised as personal resources in three studies (Tourangeau et al., 2012; Derby-Davis, 2014; Navrrao, 2010), although two studies reported self-efficacy as the main personal resource (Del Líbano et al., 2012; Issac, 2014). Psychological empowerment or emotional labour was mentioned as a personal resource by Baker et al. (2011) and Mahoney (2011). Finally, the only study conducted in the Middle East which was included referred to EI (Yamani, 2013).

3.5.3 Research Question 3: What job resources are used by the academic health science faculty: A-In general, B-In the Middle East, and C-In Saudi Arabia?

Several studies discussed JR as one of the factors to predict personal and organisational outcomes. The findings from the literature review revealed several studies that discussed job resources internationally and in the Middle East (Watanabe, 2016; Winefield, 2014; Berg, 2015; Barnet, 2011; Derby-Davis, 2014; Del Libano, 2012; Al-Hussami, 2011; Guan et al., 2014; Lane, 2010; Dankoski et al., 2011; Gutierrez, 2012; Tourangeau et al., 2012; Tourangeau et al., 2013; Tourangeau et al., 2014).

A- In General:

Job support was the most prominent job resource used in the literature. Support includes the support from the organisation as well as social support from supervisors or colleagues in the job. Organisational support was identified as: being respectful; appreciating value; providing accommodation; direction; constructive feedback; and a leadership climate as a positive and open environment. Social support, identified as having social networks and healthy relationships, provides a resource for reducing work stress and may act as a buffer against it (Hombrados-Mendieta & Cosano-Rivas, 2011). Either social or organisational support reduces job demands, and leads to the achievement of goals (Berg, 2015). Organisational support pertains to having programmes that serve to help teachers gain and enhance their professional skills (Dankoski, 2012). In addition, it was found that the concept of supportive leaders and managers may promote higher nurse faculty retention (Tourangeau et al., 2013). Colleague support was evaluated and defined as a positive relationship with colleagues and faculty leaders. Colleague support potentially increases and promotes higher nurse faculty retention (Tourangeau, 2014; Berg, 2015).

In addition to this, perceived organisational support (POS) was highlighted in two studies as a job resource, identifying it as a basic antecedent that included fair organisational procedures, supervisor support, favourable rewards, and job conditions. Perceived organisational support was found to be a strong predictor of job satisfaction and commitment and intention to remain (Gutierrez, 2012; Tourangeau, 2013). Moreover, autonomy was mentioned in four studies as an important job resource; one was in an Arabic location. Autonomy was defined as the ability to be creative and innovative, as well as possessing choices, flexibility, and being independent at work (Tourangeau et al., 2012; Winefield, 2014).

Autonomy was also identified as flexibility at work in order to empower the employee to complete their work comfortably. It is also considered as a predictor of positive organisational outcomes, and was linked with enhanced job performance, self-efficacy and job satisfaction - all factors that would encourage retention of staff (Tourangeau, 2013).

Separately, pay, which relates to regularly received payments for work completed, was seen as an important job resource. If perceived by faculty members as low and not sufficient, it leads to a decrease in job satisfaction and consequently a decrease in intention to stay in academia (Lane, 2010). Meanwhile, motivational factors, such as advancement, recognition, achievement, responsibility and growth, were considered to be essential requirements for the faculty's satisfaction and for them to remain in academia (Barnet, 2011; Del Libano, 2012; Derby-Davis, 2014). Further organisational justice was discussed as a job resource and may be understood as how an employee judges the behaviour of an organisation via characteristics such as consistency, accuracy, ethicality, and a lack of bias. Organisational justice or fairness was an antecedent of POS and helped to improve overall job performance while also influencing retention (Guan, 2015).

B- In the Middle East:

Organisational support may include rewards and recognition: good payment; bonuses; awards; and the implementation of supportive programmes (Al-Hussami, 2011). In an Arabic context, support, autonomy, and pay were found to be the three key determinants for commitment. However, out of these, autonomy was found to be the key determinant and pay was the minor requirement (Al-Hussami, 2011).

C- In Saudi Arabia:

No results relating to job resources used by the academic health science faculty were found in the review of Saudi Arabian studies. The results regarding job resources related mostly to support from organisations, leaders or colleagues, which was mentioned in 7 studies. Autonomy was discussed in three studies and salary was mentioned in two studies. Organisational justice presented the least frequently in the literature; this was discussed only by Guan (2014). Three studies described job resources as motivational factors (Barnet, 2011; Del Libano, 2012; Derby-Davis, 2014). All the studies were international, except one regarding the Middle East (Al-Hussami, 2011). The Middle Eastern study found that pay was a minor requirement as a job resource, while autonomy was most important.

3.5.4 RQ4: What is the association between job demand (JD), job resources (JR) and personal resources (PR) within stress outcomes (SO), work engagement (WE)/commitment and organisation outcomes (OO)?

From the articles reviewed, the answer to Question Four examined the association between three predictors: JD, JR, and PR and outcomes: SO, WE/commitment**,** and OO (see an example in Appendix7). Work stress, strain, emotional exhaustion, burnout, and job satisfaction were discussed as stress outcomes (SO), while the OO were discussed through three main concepts: intention to remain, productivity, and job performance.

A- Studies that examined the association between JD, with SO, WE/commitment, and OO:

Job demand was presented mostly in the literature as workload; an increase in the faculty workload predicted more stress symptoms. High workload had the strongest effect on increasing emotional exhaustion; the relationship was significant at (r=.58) (Navarro, 2011). Increasing hours of work β =-.34, p<.001 (Delibano, 2012) and pressure, and non-clarity of work policies, predicted low job satisfaction. Most staff members reported that more work pressure was associated with an increase in their psychological strain at β=.06, p<.05 (Winfield, 2014). Work pressure was increased when role conflict in terms of confused roles existed and this in turn reduced work engagement (Berg, 2015).

Job dissatisfaction was felt when faculty felt payment and income were low when compared with their long working hours, and when organisational policies were thought to be vague (Lane, 2010). When organisational policies were viewed as vague, staff members were more likely to be dissatisfied. Interestingly in the one Middle Eastern study a high workload was perceived to be a positive predictor for increasing faculty commitment (r=0.39, $p \leq 0.01$) (Al-Hussami, 2011). In relation to organisational outcomes, staff members were more likely to remain in their posts if teaching duties and administrative work were reduced (Tourangeau, 2014). Long working hours and vague or strict policies (JD) were perceived to be negative predictors for ITR in academia (Lane, 2010), and high work pressure was found to be associated with low productivity (OO) among the faculty members at (β =-.70, p<.05) (Winfield, 2014).

B- Studies that examined the association between JR, with SO, WE/commitment, and OO:

A range of job resources were associated with work engagement/commitment and organisational outcomes. These included organisational and colleague support, autonomy and pay. Organisational support emerged as the most important resource and related to the leadership climate, a positive and open environment, having open discussions, supportive relationships, and acceptance of ideas, alongside trust and receptiveness. These all had a positive influence by increasing job satisfaction (Tourangeau, 2012; Guan, 2014): $\beta=0.79$, $p<0.001$ (Guttierez, 2012), and work engagement/commitment (Al Hussami, 2011). In terms of organisation and colleagues' support, development of educational skills, were found by faculties to be important resources to increase work engagement/commitment (Berg, 2015), and career management was also a strong predictor of high work engagement (Dankoski, 2012). Al Hussami (2011) demonstrated a significant association between support and commitment ($r=0.62$).

Autonomy had a positive influence on job satisfaction (Tourangeau, 2012). Increased autonomy was associated also with increased commitment ($r=0.43$, $p\leq0.01$) (Al Hussami, 2011), and $\beta=.05$ (Winfield, 2014). One study found that an increase in faculty autonomy could reduce the level of job strain, reported at $\beta= -.27$, $p<.05$ (Winfield, 2014). Work/life balance was discussed in relation to JS and an increase in life/career management balance, predicted an increase in JS at ($\beta=0.40$, $p<.001$) (Dankoski, 2011). Pay influenced perception of job satisfaction and staff who perceived their pay as low were likely to be less satisfied (Lane, 2010), however, the opposite was also found, and when support and salary were high then job satisfaction also was high (Wang, 2015).

In relation to intention to remain, manager support emerged as the main resource with around 70% of faculty identifying this (Tourangeau, 2014). When managers were unsupportive, intention to remain decreased (Lane, 2010). A supportive leadership climate (e.g. open discussion) was found to positively increase intention to remain (Tourangeau, 2014). Highly supportive work relationships, and satisfaction with autonomy, were also associated with a lower intention to leave at ($r =.79$, $p<.05$) (Watnabe, 2016; Tourangeau, 2013). The nursing faculty felt that autonomy was one of the job resources which made them happy and enjoy work, subsequently increasing their intention to remain (Tourangeau, 2012).

Pay and compensation were perceived as negatively associated with faculty members' intention to remain, and if pay was low, faculty members were less likely to remain in academia. However, work/life balance emerged as one of the most important factors

influencing intention to remain (i.e. work/life balance was good), employees were more likely to remain; this relationship was statistically significant at (r=.112, p<.05) (Tourangeau, 2014; Tourangeau, 2013). In relation to productivity, a number of job resources emerged. Job resources in terms of high autonomy were associated positively and directly with high productivity among the faculty at β = .25 (Winfield, 2014). High organisational justice and high perceived organisational support contributed to increases in job performance at (r=0.25, P<.001) and (r=0.25, P<.001) respectively (Guan, 2015).

C- Studies that examined the association between PR, with SO, WE/commitment, and OO:

A range of personal resources emerged from the systematic review that were associated with SO, WE/commitment and OO. These PRs included EI, positive emotions, communication, loving and enjoying the work, self-efficacy, empowerment, emotional labour, work value and personal organisational fitness, interpersonal relationships and personal competencies. Meanwhile, personal resources were highlighted as being associated with stress outcomes in some studies. There were relationships between EI and job stress, especially for academic professors. There was a significant relationship between the components of EI and the levels of stress; increasing EI leads to a reduced level of job stress at (r=-0.235, p=0.005). Among the components of emotional intelligence, self-management had the highest effect on stress, while social awareness had the lowest effect. Faculty members who used this EI component were generally able to cope with stress (Yamani, 2013).

When genuine positive emotion (a personal resource) was increased in faculty members this had the effect of decreasing emotional exhaustion at (r=-.31) (Mahoney, 2011) increasing job satisfaction at (r=.219, p<.05) (Birx, 2011). Most of the faculties reported being more satisfied within their communication (PR) in their workplace and described them as respectful relationships, being fair and supportive. A range of personal resources were associated with an increase in job satisfaction, and included: loving and enjoying teaching (Lane, 2010), and high empowerment in work (r=0.37, p<0.05) (Baker, 2011). High self-efficacy related positively but indirectly, with high JS at β =.86, p<.001 (Delibano, 2012), an increase in emotional labour and better relationships with others was also significant and positive associated with high job satisfaction at r=.24 (Mahoney, 2011).

Personal resources were also associated with organisational commitment and high self-efficacy and emotional labour resulted in high organisational commitment (r =.48, P<.001), and (r=0.15, P<.001), respectively (Delibano, 2012; Mahony, 2011). Increasing work value and personal organisational fitness were associated with a greater level of normative commitment (organisational commitment) and affective commitment (emotional commitment) at (β=0.12) (Gutierrez, 2012). High self-efficacy predicted high work engagement at (β=.40, p<.001) (Delibano, 2012). Personal resources, such as interpersonal relationships in the work environment (Tourangeau, 2013; Lane, 2010), were perceived as healthy and professional and showed a high prediction of intention to remain in academia at β = 0.129. An increase in the enjoyment of work and personal competencies, such as coping, resulted in a greater intention to remain in academia (Berent, 2011; Lane, 2010).

The association between stress outcomes and organisation outcomes (OO) was discussed in five studies. Job satisfaction was found to have an influence on OO. There was a strong association between high job satisfaction and an increase in the nurse faculty's intention to remain in academia (r=.58, p<.01) (Derby, 2014; Lane, 2010). Also, high satisfaction with a job position, support for education from the organisation, and access to any required human resources, increased intention to stay (Tourangeau et al., 2013). The most significant factor to promote nurse faculty retention was professional satisfaction (Bernet, 2011), and a positive and open leadership climate, having supportive relationships, acceptance of ideas, and trust and receptiveness increased job satisfaction and in turn intention to remain (Tourangeau, 2012). Additionally, high job satisfaction and high commitment were associated with an increase in job performance (Guan et al., 2014)

3.5.5 Research Question 5: Within the identified literature, what are the key theoretical approaches?

Ten theoretical models were identified and presented according to descending frequency of citation, starting with the most commonly applied, how different studies approached and applied the models, together with limitations and strengths.

Most commonly cited model (Herzberg's hygiene-motivational theory)

Four studies used Herzberg's theory (the Motivational-Hygiene theory), which had been developed by Herzberg, Mausner and Snyderman (1959), and was also called the Two Factor Theory, suggesting that there are two factors that an organisation can adjust to maintain

motivation in the work environment. This theory proposes two groups of job factors or characteristics that impact on employee job satisfaction/dissatisfaction. The first group of factors that can encourage employees to work harder in order to contribute to satisfaction are called the motivators, such as achievement, advancement, challenging work, recognition, and responsibility. The second group of factors are called hygiene factors which, if not well managed, lead to dissatisfaction. The hygiene factors become demotivating if they are not present; these include work policy, job security, salary and benefits, and working conditions. Job demands such as long working hours and vague policies were identified as hygiene factors that result in dissatisfaction. Job resources such as supportive and professional work relationships were identified as motivators that increased job satisfaction (Lane, 2010; Derby-Davis, 2014). These two groups of hygiene and motivational factors influence the academic faculties' satisfaction or dissatisfaction and ultimately their intention to remain in academia (Lane, 2010; Berent et al., 2011; Derby-Davis, 2014; Tourangeau et al., 2014).

The model is important to understanding the distinct reasons that result in job satisfaction and dissatisfaction. It concentrates on just one outcome (satisfaction or dissatisfaction) without considering any other work-related outcome. It is limited but might be useful for studies that are only interested in job satisfaction but is not applicable for an empirical study that needs to assess varied outcomes, including organisational outcomes.

Second Most Frequently Cited Theoretical Framework (JD-R model)

The JD-R model (Bakker & Demerouti, 2007) was used in three studies and this model was used commonly to assess work-related stress factors. The JR-D model (Bakker & Demerouti, 2007; Demerouti et al., 2007) was developed to assess the work-related stress of burnout, and consequently the organisational outcomes. At the core of the JD-R model exists the assumption that every occupation may have its own causes of employee wellbeing, where causes or reasons can be categorised into two groups (i.e. job demands and job resources). Increased or excessive job demands can lead to mental and physical exhaustion which can result in stress symptoms. The model was developed to add to the notion of resources, and personal, as well as job resources, are identified. These have the potential to increase motivation and foster engagement. Both demands and resources may predict or be associated with organisational performance or outcomes. Additionally, the relationship between job demands, job and personal resources and stress outcomes has been studied and it is possible that resources may buffer the poor consequences of job demands (Bakker & Demerouti, 2013).

The JD-R model has been tested in more than 12 countries, such as Spain, Greece, Germany, South Africa, China and Australia (Bakker & Demerouti, 2013).

The JD-R model has two pathways: the negative pathway that presents as job demands, including physical and psychological costs, leading to impaired health, stress or strain outcomes and an increase in burnout, exhaustion and stress; and the positive pathway that presents as resources, including personal (e.g., EI) and job resources (e.g. support, pay) that work to promote motivation and engagement in the work environment. Low levels of JD (pressure, workload, excessive work) and a high level of resources (autonomy, support) are beneficial and significant to university staff to increase their satisfaction and productivity (Del Libano et al., 2012; Winefield, 2014; Berget et al., 2015). The JD-R model was utilised in this review also to examine how prolonged job demands entailed physical and psychological costs that led, via energy depletion, to impaired health and exhaustion. Additionally, the JD-R model was used as a theoretical framework to construct and explore how demands affected work engagement in education. Concentrating on adding job and personal resources may be more important than reducing job demands (Berg et al., 2015).

In summary, the job demand resource model (JD-R model) seems to be a very comprehensive and valuable model. The JD-R has evolved as a model and can explore relationships between variables/concepts including predictors, moderation and mediational relationships. It is flexible and easy to classify the factors and guide the direction between them in positive and negative ways that include job demands, job resources and personal resources.

Infrequently Cited Models

The Dual Process Model of Organisational Commitment

This model was developed by Yoon and Thye (2002) and suggests that dual processes lead to organisational commitment: one pathway relates to job satisfaction and the other to perceived organisational support. The predictors (JS, and perceived organisational support POS) are observed to independently predict organisational commitment). This model can be used to investigate the relationship of faculty members' organisational commitment to their job satisfaction, perceived organisational support, job autonomy, workload, and pay. In a Jordanian study, job demand was interpreted as workload, and job resources as autonomy, pay and organisational support. Job resources and job satisfaction were found to predict job commitment (Al-Hussami et al., 2011). However, the theory justified the previous constructs

separately, and investigated two distinct paths to organisational commitment: job satisfaction and perceived organisational support. It was limited to include one outcome in terms of commitment and was used once in literature.

The Empowerment Theory

Kanter's (1993) theory of empowerment involves a debate on organisational behaviour and empowerment. Empowerment is promoted in the work environment by assisting employees with resources, support, and the opportunity to learn and develop, and this creates feelings of competence, autonomy, and job meaningfulness. When they are empowered, employees are more committed to the organisation, more responsible for their work, and better able to handle job demands in an efficient way. Kanter's theory addresses how constructs in the workplace can help, by using resources that empower employees to achieve their work in a more effective manner.

This theory was identified to show competence and confidence in one's job performance, ability to influence job satisfaction, and organisational outcomes. It was applied to utilise the predictor of personal resources (psychological empowerment) to increase the degree of nurse educators' satisfaction (Baker et al., 2010). This theory has limitations as based on one personal resource (empowerment) without including any other predictors.

Voydanoff's Demand and Resource Fit Approach Theory

This theory, developed by Voydanof (2004), suggests that both work demands, and family resources are associated with the work demands–family resources fit. The fit is two types: demands-abilities and needs-supplies. Demands incorporate quantitative and qualitative job requirements, role expectations, and group and organisational norms; while abilities include skills, training, time and energy that may be used to meet demands. Fit appears when the individual has the abilities needed to meet the demands of the environment. Strain is anticipated to increase as demands exceed abilities.

This theory's approach was utilised to discuss the influence of some factors such as JD (working hours and conflict), JR (autonomy, pay and organisational support), on job satisfaction, and OO (job commitment) (Watanabe et al., 2016). However, testing the constructs restricted the understanding of faculty turnover in relation to work/family balance, as family-related demands and resources were not an integral part of the theory.

The Emotional Labour Theory Approach

In this theory, emotional labour is determined to be the total effort in emotion and expression, invested in a planned and controlled way, to fulfil the intention of being satisfied by the job. Managing emotions leads to better social perceptions, along with organisation. Emotional labour has been related to various job behaviours and reactions, as it was found to be negatively related to job satisfaction, memory performance, depersonalisation, and positively with job stress, burnout and exhaustion. This theory examines the influence of emotional labour and how to use it and its relationship to several work outcomes, which equated to the predictor PR (emotional labour), which if perceived as a negative emotion will lead to excessive emotional exhaustion and low job satisfaction, as well as a decrease in organisational commitment (Mahoney et al., 2011). This theory concentrates on only one predictor of personal resources (emotional labour).

Two models of EI were used by Yamani et al. (2013), namely the Mayer and Salovey model, and the emotional-social model of Bar-On (2004). The Mayer and Salovey model (1997) identified EI as the ability to perceive, regulate and use emotion, understanding the emotion that is reflected in the thinking process and behaviour adaptation. The model looks at emotion as a valuable source to guide the individual to react usefully within a social surrounding, and sees that individuals vary in their ability to use emotion to process their thinking and cognitive ability, such as problem solving and managing their own and others' emotions. This consequently reflects on their reactions and performances in themselves and within a social environment. This ability model concludes that EI has four types of abilities: 1) perceiving emotions, 2) using emotions, 3) understanding emotions, and 4) managing emotions. The Bar-On model of EI is considered not as cognitive intelligence, but as competencies and skills in the form of an individual's behaviour to adapt within environmental pressures and demands (Bar-On, 1997). Bar-On's model consists of five dimensions and 15 components: intrapersonal skills, interpersonal skills, adaptation, stress management, and general. These models are used mainly to investigate the relationship between EI and JS in the Faculty of Medical Science, Isfahan University, in order to understand the predictor PR (emotional intelligence) and work-related stress. It was limited as it was just based on one predictor PR (emotional intelligence). It might be useful for any studies that specifically search for the influence of EI.

The Human Capital Theory, combined with the Structural Theory, the Self-Determination Theory and the Psychological Theory were used to examine the impact of some predictors, such as JR, on career outcomes. The human capital theory emphasises the monetary and non-monetary return of any career choice. Structure and self-determination highlight the impact of institutional features on job satisfaction; and the psychological theory emphasises the proposed relationship between job performance and satisfaction (Wang et al., 2015). Among the limitations of using one of these theories is the selection of the variety of variables to be tested as a predictor or outcome.

Eight hypothesised models emerged from this systematic review; they were new and untested, and therefore, difficult to use. They are models which were developed by the researcher. Hypothesis models have limitations, and it is difficult to use for many reasons; they are just an idea that explains some thought about the concept that are not based on strong evidence, needing to go through varied testing process to prove or disprove this hypothesised model. A hypothesis model becomes a model after it has been tested on several occasions (Martien & Taylor, 2003), and therefore it may be possible to work with them in the future after testing their applicability and psychometric adequacy in different cultures.

There were commonalities across these 11 presented theories and models, and the following table concludes the frequency of use within the included studies.

Table 3.5: Theoretical Approaches

Authors of the Study/Year	Place of Study	Theoretical Approaches / Author / Year	No. of Studies Used
Lane et al., 2010	USA	Herzberg's hygiene-motivational theory, Herzberg, Mausner and Snyderman (1959)	4
Derby-Davis, 2014	USA		
Tourangeau et al., 2014	Canada		
Berent et al., 2011	USA		
Winefield, 2014	Australia	The job demands-resources (JD-R Model) model, Bakker and Demerouti (2007)	3
Berg et al., 2015	USA	Work engagement model that derived from the JDR model, Bakker, A.B. and Demerouti (2008)	
Del Líbano et al., 2012	Spain	The RED Model (Resources-Experiences-Demands Model) derived from the JDR model, Salanova et al. (2007)	
Yamani et al., 2013	Iran	Two major models of emotional intelligence including the Mayer and Salovey model and the emotional-social model, Bar-On (2004)	1
Bakker et al., 2010	USA	Empowerment theory, Kanter (1993)	1
Al-Hussami et al., 2011	Jordan	Dual process model of organisational commitment, Yoon and Thye (2002)	1
Mahoney et al., 2011	USA	Model of emotional labour, Glomb and Tews (2004)	1
Watanabe et al., 2016	USA	Voydanoff's demand and resource fit approach (2004)	1

Wang et al., 2015	Mexican	Human capital theory, Ehrenberg (1991); Structural theory, Gagner and Deci (2005); Self-determination theory, psychological theory, Judge et al. (2001)	1
The other 8 articles		Developed and hypothesised model	8

In the review, of all the theories and models that have been used by researchers to support their studies' frameworks, Herzberg's hygiene-motivational theory was the most frequently used, which had two types of factors, hygiene (JD) and motivation (JR) factors that predicted just one emotional outcome (job satisfaction or dissatisfaction) without presenting other emotional outcomes and organisational outcomes. As well as the two models of Dual process, the model of organisational commitment and Voydanoff's demand and resource model examined the influence of some predictors of JD and JR, with very limited outcomes. The recent JDR model, however, has a pathway that clearly linked all the factors (JR, PR, JD) that together had either personal or organisational outcomes.

Some models, such as the EI and emotional labour models, covered only core personal resources without examining the influence of other factors, such as JD and JR. The rest of the models and theories (emotional labour, **c**apital theory, structural theory) were suggested as not suitable for use, as they covered minor predictors of outcomes. Therefore, the JD-R model was found to be worthy and the most suggested model to apply in the study; it includes all the relevant groups of variables and outcomes and covers all the predictors (JD, PR, JR) and the personal and organisational outcomes that are presented clearly through two pathways. The JDR model is flexible enough to allow testing of the different relationships and interactions between the variables. The JD-R model provides a clear guide to understanding the directions of the relationships between the dependent and independent factors. The JD-R model seems to be applicable to use in the empirical study context. It has been tested and applied in various occupational settings internationally for various occupational groups (including teachers, hospital nurses, dentists, academic staff, health care professionals etc.) (Schaufeli & Salanova, 2006). The JD-R model directs the construct and focuses on understanding how demands and resources interact and reflects on the interpretations of aspects of the work environment required (Del Libano et al., 2012; Winefield, 2014; Berget et al., 2015).

3.5.6 RQ 6: Tools and Measurements

The twenty-one studies used different measurement tools as described in Table 3.6 and will be presented as the following criteria.

Do the tools cover the proposed predictor and outcome variables?

There were a comprehensive range of tools presented and these covered the potential variables. Regarding job demands, there were six measures, testing the following concepts: two tools for workload, one tool for work pressure, one tool for workaholism and two tools for role conflict. To measure job resources, three tools were used to measure autonomy and five for organisational support, while there were two tools for colleague support. For pay and salary, there were two instruments (Tourangeau et al., 2013) and there was one tool which assessed organisational justice. Personal resources were measured by different tools. There were three measures to assess communication and the other concepts of personal resources were only measured once in the literature, and these were: EI, self-efficacy, work value, personal characteristics, empowerment, work enjoyment and emotional labour.

Stress outcomes had the highest number, with eleven different tools used to measure job satisfaction, three for work stress, and only one tool each for job exhaustion, physiological symptoms, and burnout. Commitment was measured by four tools, while work engagement was measured by only one tool. For the measurement of organisational outcomes (OO), two measures assessed ITR, one measured job performance, and also one measured the productivity.

Do the tools demonstrate acceptable reliability and validity?

Reliability was assessed mainly using Cronbach's alpha coefficients; most of the values were over the acceptable level of 0.7 (see Table 3.6). Eight tools did not report reliability: Survey Item Questioners Outlining List of Incentive and Disincentive (Tourangeau, 2014); UWES Utrecht Engagement Scale (Shaufeli, Bakker & Salanova, 2006); Work Self Efficacy Scale (Salavona, 2007) that was applied by Delibano (2012); and a survey item to measure Faculty Carrier Satisfaction (Dankoski, 2011). In addition, four tools were used by Guan (2015) that missed reliability assessment: Perceived Organisation Support Scale (Eisenberger, 1986-2002); Organisation Justice Scale; Job Satisfaction Scale (Smith et al., 1969); and Job Performance Scale (Williams & Anderson, 1991).

A number of tools had face or content validity only. Some did present more robust construct validity through factor analytic techniques while some did not assess validity at all: the Faculty Members Questionnaire Survey (Developed Tool of measuring workload) that was used by Al-Hussami (2011); Organisation Commitment Scale (Mayer, Allen & Smith, 1993);

and the Job Satisfaction Questionnaire (Andrew & Smith, 1976), which was applied in Mahoney (2011).

Therefore, this review found a range of tools which demonstrated good validity and reliability and are potential candidate tools for Phase 3 of the empirical study. However, there are a number of other criteria to be considered.

Are the tools supported by a theoretical framework?

All the tools presented in the studies were supported by theoretical frameworks as presented in Table 3.6. As the JD-R model is the most likely one to be used in the empirical study, it was important to establish whether the tools could be used to operationalise the variables included in this model. This was the case.

Is the tool suitable for Saudi culture?

There were only two studies conducted in the Middle East. Al-Hussami et al. (2011) developed tools to measure workload, pay, and job satisfaction, in Jordan which relates to the Saudi culture. Additionally, Yamani (2013) conducted a study in Iran and used tools to measure EI and job stress as outcomes. Therefore, these two tools might be used for an empirical study with consideration of other criteria.

All potential tools that will be applied in the empirical study should be clear and understandable by participants in a Saudi setting. Therefore, it is essential to select tools that have been used and applied previously in the same contexts and culture, in case the tool is not used in a study context that needs to be tested for understanding (Tourangeau et al., 2000).

Can the tool be accessed?

The final criterion must be accessibility. Developed tools may or may not be easily obtained for research purposes, and therefore, in order to be used, they need to be accessed.

Table 3.6: Tools and Measurements

Author	Tools	Reliability and Validity	Concepts measured	Theoretical framework Yes/No	Used in the Middle East Yes/No	Accessible Yes/No
Al-Hussami, M. et al. (2011)	Developed tool by researchers. Faculty Members Questionnaire Survey Instrument 1. 5 items using Yoon and Thyes (2002). Dual. 2. Developed Tool of measuring workload. 3. Developed Tool of measuring pay. 4. Measure Index of job satisfaction	1. Cronbach alpha acceptable. Construct validity established. 2. Cronbach alpha statistic acceptable. No demonstrated validity. 3&4. Cronbach alpha statistic acceptable, Some evidence of construct validity	1.Organisation commitment, job autonomy (JR), perceived organisational support (JR) 2. Workload (JD) 3. Pay (JR) 4.Job satisfaction (SO)	Yes (Dual process model,2002)	Yes	No
Baker et al. (2010)	1- Spreitzer's (1995) Psychological Empowerment Scale; 12-item Psychological Empowerment Scale (PES).	For all, Cronbach alpha statistic acceptable, Content validity only	1- Measured the four components of meaningful work, competence, autonomy, and impact (JR) 2- This scale measured structural empowerment (JR)	Yes (Empowerment theory)	No	No

	2- Laschinger et al**.** (2001) Conditions of Work Effectiveness II (CWEQ-II): 3- Hackman and Oldham (1975) Job Diagnostic Survey (JDS): measured satisfaction at work. 4- Researcher-developed questionnaire22 items based on nurse faculty job satisfaction in the NLN (2005) survey on faculty role satisfaction.		3- Job satisfaction (SO) 4- Job satisfaction (SO)			
Birx et al. (2011)	1- The JDI Job Descriptive Index (Balzer et al., 2000) used to measure job satisfaction.	Reliability tested for 6 scales only and found to be acceptable. Content validity demonstrated.	Job satisfaction (SO)	Yes (developed theory)	No	**Yes**
Dankoski (2011)	Developed survey in 2006 and 2009, to measure faculty career satisfaction and influences on faculty	No evidence found of reliability test. Face validity was established.	Job satisfaction (SO)	Yes (developed theory)	No	No
Del Libano et al. (2012)	1- Work self-efficacy measured by Salanova et al. (2007). 2- Workaholism measured by the short Spanish version (10 items) Del Líbano, Llorens, Salanova & Schaufeli (2010) of the DUWAS	1&3. No evidence for reliability test 2. Cronbach alpha statistic acceptable. Confirmatory factor analysis demonstrated construct	1- Work self-efficacy (PR) 2- Workaholism (JD)	1-Yes (JD-R model) 2-Yes (JD-R model)	1-No 2-No	1-No 2-No

	(Dutch Work Addiction Scale; Schaufeli, Shimazu & Taris, 2009). 3- Work engagement. Using the short version of the UWES (Utrecht Work Engagement Scale; Schaufeli, Bakker & Salanova, 2006), (vigour, dedication, and absorption). 4- Negative outcomes. Measured by two dimensions: work overload and work/family conflict. 5- Positive outcomes**,** measured by job satisfaction and organisational commitment (Salanova et al., 2007)	validity for all scales of the author.	3- Work engagement (WE) 4- Negative outcomes (JD) 5- Positive outcomes (SO)	3- Yes (JD-R model) 4 -Yes (JD-R model) 5-Yes (JD-R model)	3-NO 4-No 5-No	3-**Yes** 4-No 5-No
Derby-Davis, (2013)	1- Job satisfaction (Sluyter and Mukherjee, 1986). Job Satisfaction Survey 2- Intent to stay was measured by the Nurse Educators' Intent to Stay in Academe Scale.	Cronbach alpha statistic acceptable. Content validity only	1- Job satisfaction (SO) 2- Intention to remain (OO)	1,2-(Yes) Herzberg's Motivation–Hygiene Theory	1-No 2-No	1-No 2- **Yes**
Guan et al. (2014)	1- Perceived organizational support scale (Eisenberger et al. (1986). 2- Job performance scale (Williams and Anderson, 1991) 3- Organisational justice scale **(**Erdogan, Liden, and Kraimer, 2000).	Reliability is not reported for all scales. All scales demonstrated construct validity.	1- Perceived organisational support (JR) 2- Job performance (OO) 3- Organisational justice (JR) 4- Job satisfaction (SO)	Yes (developed theory)	No	No

	4- Job satisfaction scale (Smith et al., 1969)					
Gutierrez (2012)	1. The 18-item tool revised the Three Component Model (TCM): Affective, Continuance and Normative Commitment tool (Meyer & Allen 1997). 2.The 21-item Work Values Inventory (Meyer et al., 1998). 3. The 9-item Perceived Organisational Support instrument (Eisenberger et al., 1986). The 3-item Perceived Person-Organisation Fit Scale (Cable & Judge, 1996); 4. The 4-item Developmental Experiences Tool (Wayne et al., 1997); and the 6-item Global Job Satisfaction Instrument (Pond & Geyer, 1991).	Tools have all been previously tested and had good reliability. Construct validity demonstrated.	1- Commitment (OO) + Work Values (PR) + Organizational Support (JR) + Perceived Person-Organization Fit (PR) + Developmental Experiences (JR) + Job satisfaction (SO)	Yes (developed theory)	No	No
Lane et al. (2010)	Subscales of the WFSDS Wood Faculty Satisfaction/Dissatisfaction (Wood, 1976)	Cronbach alpha statistic acceptable. It has acceptable content and construct	Job satisfaction (SO)	Yes (Herzberg's theory)	No	No
Mahoney et al. (2011)	1- Emotional exhaustion. Wharton's (1993) 6-items are based on Maslach's (1982b) conceptualisation	Reliability: The researcher found that the other questionnaires correlate highly with other measures and	1- Emotional exhaustion (SO)	Yes (Emotional Labour model)	No	No

	of burnout (Abraham, 1998; Wharton, 1993). 2- Emotional Labour. The original 42-item Discrete Emotions Emotional Labour Scale (DEELS) by (Glomb & Tews, 2004). 3- Job satisfaction was assessed using the Andrews and Withey Job Satisfaction Questionnaire (Andrews & Withey, 1976). This questionnaire was composed of five items. 4- Organisational commitment scale by Meyer, Allen and Smith (1993).	possessed adequate internal consistency. 1&2-Convergent validity was found for the subscale of the Emotional exhaustion scale and Emotional labour scale. 3&4-. No demonstrated validity.	2- Emotional Labour (PR) 3- Job satisfaction (SO) 4- Organisational commitment			
Navarro et al. (2010)	1- Occupational Stress Scale (ELE) Fernández Ríos (1995); consisted of 49 affirmative statements. 2- The Maslach Burnout Inventory (MBI) Maslach & Jackson (1986). An adaptation of this by Seisdedosn (1997). 3- Magallanes Stress Scale (EMEST) García, Magaz & García (1998). It consisted of 15 elements.	Reliability was demonstrated with accepted Cronbach alpha. Validly insured through exploratory factor analyses and component analyses.	1- Work stress (SO) 2- Burnout (SO) 3- Stress (SO)	Yes (developed theory)	1-No 2-No 3-No	1-No 2-**Yes** 3-No
Tourangeau et al. (2013)	1- Autonomy: Psychological Empowerment Scale - (Spreitzer, 1995)	Reliability: demonstrated acceptable value To ensure validity; confirmatory factor analyses	1- Autonomy (JR) 3- Quality of leadership (JR)	Yes (developed theory)	No	No

	2- Quality of leadership: Resonant Leadership Scale (Cummings et al., 2005). 3- Perceived organisational support: Perceived Organisational Support Scale (Eisenberger et al., 1986). 4- Perceived levels of empowerment by organisations: Conditions for Work Effectiveness Questionnaire - global empowerment subscale (Laschinger et al., 2001). 5- Quality of physical work environment: Physical Work Environment Scale (Developed by authors). 6- Quality of relationships with colleagues: Work Group Relationships Scale (Riordan & Weatherly, 1999). **7-** Satisfaction Scale - salary and benefits subscale (Mueller & McCloskey, 1990).	and measurement with single item indicators, including item response options.	3- Perceived organisational support (JR) 4- Perceived level of empowerment by organizations (PR) 5- Quality of the physical work environment (JR) 6- Quality of relationships with colleagues (PR) 7- Satisfaction with salary and benefits (SO)			
Tourangeau (2014)	Two survey item questions of outlining the list of incentive and disincentive	No evidence for reliability Validity was assured through Content validity.	General Job resource (JR)Personal resources, demands (JD) and out comes	Yes (Herzberg's theory)	No	No

Watanabe (2016)	Single items measure the Work family turnover intention	No evidence for reliability and validity	ITR(OO)	Yes (Voydanoff's theory)	No	No
Winefield (2014)	1- Work Pressure: Three standard questions were used (Beehr, Walsh, & Taber, 1976). 2- Job Autonomy Six items from the autonomy sub-scale of the Moos Work Environment Scale (Moos & Insel, 1974). 3- Work/Family Conflict This comprised five items drawn from a well-known scale (Frone, 2000). 4- Psychological Strain 12-item version of the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988). 5- Physical Symptoms Nine stress-related physical symptoms, such as headaches, tiredness, muscle and back pain, dizziness, and shortness of breath.	Reliability demonstrated accepted values for his scales. Variables inter-correlation was done, he conducted confirmatory factor analyses to examine the structure of all his measures.	1- Work pressure (JD) 2- Work Autonomy (JR) 3- Work/Family Conflict (JD) 4-Psychological Strain (SO) 5- Physical Symptoms (SO) 6- Organisational Commitment	Yes (JD-R model)	No	No

	6- Organisational Commitment Four items from a well-known scale (Porter, Steers, Mowday & Boulian, 1974). 7- Job Performance A single item assessed respondents' self-ratings of their productivity.		7- Job performance (OO)			
Yamani et al. (2013)	1- Bradbery and Grios Emotional Intelligence Questionnaire containing 28 items. 2- Job Stress Questionnaire with 30 questions by Mossadegh Rad (2011). The questions were scored in six scales.	Reliability demonstrated accepted values for his scales. The validity of the EI construct was analysed via confirmatory factor analysis.	1- EI (PR). 2- Job stress (SO)	Yes (EI model)	Yes	No

3.6 Discussion

The systematic review used a very workable method to address all the identified review questions, and findings will inform the planned empirical study. This was a large piece of literature, but the rigorous and transparent search approach minimised bias and resulted in few papers that met the inclusion criteria. One main reason for exclusion was lack of a theoretical framework. Studies were mainly quantitative, with a few qualitative and mixed method studies. All the studies were critically appraised using a valid apprised tool, QATSDD (Sirriyeh et al., 2014), and even though there was no 'cut-off' level for quality, the reviewed papers appear to be of satisfactory quality at a range between 52.38% - 83.33%, and importantly the selected articles were all underpinned by the theoretical framework, thus adding to the quality. The included articles were mainly from Western literature, with around half from the USA, with limited articles from the Middle East, but there was a lack of Saudi literature. There is, therefore, a need to assess the problem in a Saudi setting.

The systematic review has highlighted a range of job demands, job resources and personal resources that were perhaps not surprising but provide the evidence for inclusion in the empirical study and might help to explain the study findings. The most frequent or most important job demands included workload, work pressure, hours of work or workaholism, and faculty role conflict. Interestingly, the one Arabic study found the opposite and demonstrated that when workload was high, faculty commitment increased (Al-Hassami, 2011). The reasons for this are not obvious, although this has implications for studies carried out in the Middle East and is worthy of further exploration.

A range of personal resources were also identified as a positive influence: work relationships, love and enjoyment of work, personal characteristics (age, level of education and experience) and perceived personal competence (ability to achieve desired goals), self-efficacy, psychological empowerment or emotional labour, emotional family work support, work value and personal organisation (Tourangeau et al., 2014; Isaac, 2014). In addition, the Middle East personal resources were conceptualised as emotional intelligence (Yamani et al., 2013). Most of the studies used specific concepts that represent emotional intelligence such as self-efficacy, empowerment, work relationships, emotional labour, and love and enjoyment. Interestingly this emerged clearly

within the one Middle Eastern study and is worthy of further exploration. Saudi Arabia is a Middle Eastern country; hence investigation into EI as a personal resource from a Saudi perspective may highlight aspects of this concept to provide further explanation of their culture-specific issues that must be confirmed or rejected. Importantly, this result from a Middle East study may support the initial notion of the importance of EI that emerged from the scoping review in the previous chapter.

The fourth question discussed in the literature related to the association between the predictors JD, PR, JR with stress outcomes, WE/commitment, and OO. In the quantitative studies, the relationship between them were tested statistically and from the qualitative studies these relationships were explained from the participants' perception (Lane, 2010; Navrrao et al., 2010; Al-Hussami, 2011; Berent, 2011; Del Líbano et al., 2012; Tourangeau et al., 2014; Winefield, 2014; Berg, 2015; Watanabe et al., 2016).

The Western studies proposed that greater workload leads to higher stress outcomes, as well as a decrease in commitment, and a lower likelihood to remain in work. This contrasts with the Arabic studies, which found that a greater workload predicted an increase in commitment (Al-Hussami et al., 2011). This is an interesting finding, which might be because the workload is perceived as challenging demands that motivate a good achievement, rather than being perceived as hindering demands that contribute to bad consequences (Bakker et al., 2017). It is important, therefore, to test this result further in a study context. In addition, an increase in the hours of work was associated with low job satisfaction. Staff were more likely to remain in academia if teaching duties and administrative work were reduced and long working hours and vague or strict policies were more likely to result in a reduced intention to remain (Tourangeau et al., 2014). Therefore, it is interesting to critically examine and trace this association of these emerged JD variables with stress outcomes, and how they influence the intention to remain from Saudi Arabian academic faculty perspectives.

Greater organisational support was associated with a significant increase in job satisfaction (Guan, 2014; Gutierrez, 2012; Wang, 2015; Dankoski, 2011). The Arabic studies were also similar in discussing that high levels of support showed an increase in faculty satisfaction (Al-Hussami, 2013). However, there is a requirement to critically examine the influence of this type of support and its association in Saudi Arabia to obtain more evidence. Autonomy seemed to be particularly

associated with the Middle East study, as increased autonomy led to increased commitment, as well as reducing work-related stress outcomes (Tourangeau, 2012; Winfield, 2014; Al-Hussami, 2013). In addition, pay, managerial support and leadership, supportive work relationships, and autonomy emerged across both Western and Middle Eastern literature as important resources that influenced ITR (Tourangeau et al., 2014; Lane, 2010; Al-Hussami, 2013). Therefore, there is a need to assess this association in the empirical study.

The Western literature used a range of personal resources (e.g. love and enjoying the work, personal competence, self-efficacy, self-empowerment and emotional labour), to study the association between them and the personal and organisational outcomes in terms of a high level of intention to remain (Lane, 2010; Navarro et al., 2010; Berent, 2011; Del Líbano et al., 2012; Tourangeau et al., 2014; Winefield, 2014; Berg, 2015; and Watanabe et al., 2016). Work engagement and commitment was associated with the PR of self-efficacy in only one study, indicating that it may not be a significant factor in determining retention (Dankoski, 2012). Hence, in order to support or reject this idea, there is a need to test that association via empirical work. The Middle Eastern literature studied the association mainly between PR, in terms of EI only, within work-related stress outcomes and commitment. These associations may need to be considered in the study in Saudi Arabia. High levels of EI are associated with lower stress in the Middle East, although Western studies used the specific content of EI to relate them with personal and organisational outcomes. Therefore, the similarities and differences in the relationships between EI and outcomes may require more focused examination in Saudi academic faculties to advance the understanding of EI and how it applies and is used, from a Saudi cultural perspective. This issue of EI influence on stress was also highlighted as an important result from the EI scoping view in the previous chapter.

Reviewing the theories and models in RQ5, the two most frequently used were the Herzberg theory and the JD-R Model and there were then a range of lesser cited models (see Table 3.5). Herzberg's hygiene-motivational theory (Herzberg, Mausner & Snyderman, 1959) concentrated on the hygiene factors, which were affiliated to and explained demands (JD) and motivational factors as resources (JR), but only linked them with satisfaction/dissatisfaction without considering other personal outcomes and the organisational outcomes. Herzberg's theory covered only one term of job satisfaction. While JD-R had a clear pathway that linked all the

predictors (JR, PR, JD) together with outcomes that were either personal or organisational. The JD-R Model is a flexible model, without a pre-defined set of tools that is characterised as having clear explanations of both pathways of negative and positive factors. JD reflects the negative pathway, including mental, emotional and physical demands which predict stress outcomes. The positive pathway reflects JR in terms of support, autonomy, and feedback, as well as the PR in terms of EI and self-efficacy, both of which are associated with motivation and organisational outcomes.

Additionally, the JD-R model enables clear presentation of the directions, relationships, mediation and interactions between the variables. Based on all these reasons and evidence, the JD-R model may be an appropriate model for use as a theoretical framework in the main study. The emerged models have similarities to these approaches, as they all seem to include some variables regarding the work environment that were demands and resources, and how their interactions may lead to either positive or negative consequences for both the individual and an organisational outcome. The rest of the models and theories (emotional intelligence, emotional labour, capital theory, structural theory) were covering as minor variables of study factors that might not be applicable for use in empirical study. However, EI might help us to understand the influence of this personal resource on personal and organisation outcomes within the Middle East.

The review encompassed many tools that were addressed by RQ6. A number of potential tools which had demonstrated reliability and validity could be used, and also covered the predictors and outcomes that were discussed and categorised (see Table 3.6). The reviewed tools that will be chosen for use in the empirical study need to be selected following various criteria. The selection should be based on official access to the tools, accepted validity, and reliability, support by a theoretical framework, and must be guided by the JD-R model as much as possible, as well as covering the empirical predictors and outcomes. In addition, the tool has to be accessible. Table 6 provides a summary of the application of these criteria. Whilst many of these tools had acceptable psychometric properties and could be used with the JD-R model, few had been used in the Middle East and even fewer were accessible despite many attempts at contacting the tool developers.

There were four measures available for access by the researcher as presented in Table 3.6 and that were planned to use in the study. These are: The Maslach Burnout Inventory (MBI)

(Maslach et al., 1997); Descriptive Index Scale (JDI) (Blezar, 2000) to measure the job satisfaction; UWES (Utrecht Work Engagement Scale; Schaufeli, Bakker & Salanova, 2006) to measure the work engagement; and Nurse educators' levels of intention to stay (Derby, 2014) to assess ITR. For the others, due to tools that were unable to access the plan, alternative tools are contemplated following specific criteria.

3.6.1 Strengths and Limitations

3.6.2 Database Search Method

A key limitation that hindered the systematic review was that seven articles could not be obtained. After contacting the librarian authorised to use the database system, they were not available as full texts and were presented only as titles and abstracts. Also, this systematic review did not explore grey literature and theses, and that might miss valuable issues. However, one of the strengths of the search method was that it systematically applied the eligibility criteria (mentioned in the inclusion and exclusion criteria table). Also, to assure robustness and minimal bias, two reviewers (supervisors) reviewed half the titles and abstracts independently; the results of the two reviewers were compared with the researcher's results to identify levels of agreement, based on two agreements out of three. There were clear PICO questions and cleared mechanism of data extraction guided this systematic review that may assure that the relevant literature was accessed.

3.6.3 Quality of the Articles

All the reviewed articles were of good quality, ranging between 52.38% and 83.33% with QATSDD (Sirriyeh et al., 2014). The QATSDD was shown to be a good tool for use in the quality assessment of a variety of study designs and, as such, may be an extremely useful tool for reviewers to standardise and increase the rigour of their appraisals in reviews of published studies which include qualitative and quantitative articles. This assessment tool has a checklist list format which is useful for accurate assessment and uses specific score calculations to grade each paper by percentages; it is the QATSDD tool used by health service researchers in the fields of psychology, sociology and nursing.

In addition, there was some strength in that all the 21 articles included were recently published (between 2010 and 2016), thereby making the review up-to-date and relevant to the larger aim of the study to influence retention of nursing faculties in Saudi Arabia and in similar contexts. The systematic review included different quantitative, qualitative, or mixed-method studies that gave a rich and deep understanding and clear interpretation of the literature studies. In addition, all the studies included were supported by clear theoretical frameworks, suggesting their research would be sound and reliable. There were some limitations reported, namely the research gap that exists with regard to studies from Saudi Arabia. Most of the review's studies were international (from the USA, Canada, Spain, Mexico, China, Australia, India, China), with one study from Jordan, and one from Iran (see Figure 3.3).

3.6.4 Methodologies of the Review Articles of the Included Studies

Three articles used a qualitative research design, which provided the freedom for deep thematic and/or conceptual content analysis research design (Berg, 2015; Isaac, 2014; Lane, 2010; Tourangeau, 2012). Among the strengths in certain studies was the use of mixed methods, which enriched the research with both the benefits of qualitative and quantitative design to gain from the interpretation of qualitative design and the numerical and statistical analysis standards of quantitative design (Birx, 2011; Dankoski, 2011; Dellibano, 2012). Some studies utilised a descriptive design that may facilitate more elaboration of terminology and the conceptualisation of variables (Bakker et al., 2010; Tourangeau et al., 2012; Tourangeau et al., 2014; Derby-Davis 2014).

There were some limitations: certain articles used a cross-sectional design, which limits generalisability as data were collected at one time point only (Al-Hussami, 2011; Barnet, 2011; Guan 2014; Gutierrez, 2012; Mahoney, 2011; Tourangeau et al., 2013; Tourangeau et al., 2014; Winefield, 2014; Watanabe, 2016; Yamani, 2014). Random sampling should reduce bias, although in some studies, sample representativeness was difficult to ascertain (Al-Hussami, 2011; Derby-Davis, 2014; Navarro, 2010). In some studies, the sample size was small which may have resulted in the study being underpowered, and therefore, these results cannot be viewed with confidence (Bakker, 2010; Guan, 2014; Gutierrez, 2012; Berent, 2011).

The sample size was inadequate in some studies, which affects the reliability of a survey's results and reduces the statistical power, while a larger sample size could have enhanced the results. Furthermore, the small response rate may have influenced the accuracy of the results and the relationship between the variables (Kim, 2013). Meanwhile, other studies did not report participant recruitment in sufficient detail (Al-Hussami, 2011), which may result in bias and lack of objectivity in data analysis. Hence, utilising both quantitative and qualitative designs may provide richer conclusions and recommendations.

3.6.5 Tool Strengths and Limitations

Most tools were tested for face, content, construct validity and reliability; however, some studies had not been tested sufficiently for validity and reliability (Watanabe et al., 2016; Guan 2015).

3.7 Conclusion

This systematic review identified a range of job demands and job/personal resources associated with stress outcomes, work engagement/commitment and intention to remain, in academic staff members within higher education. Most of the literature was from a Western perspective with only a few from the Middle East and none from the Kingdom of Saudi Arabia. Among the predictors or independent variables from the literature, job demand was addressed as: workload, work pressure, hours of work or workaholism, and role conflict. This was alongside the personal resources that were presented: work relationships, love and enjoying work, personal competence, self-efficacy, self-empowerment and emotional labour, emotional family support, work values, personal organisational fitness, and EI. The review studies described the job resources as organisational support, colleague support, autonomy, pay, organisational justice, and work/life balance.

All the independent variables (JD, PR, JD) may be taken into account in the empirical studies as predictors. In addition to this, the outcomes of the dependent variables that were presented showed emotional outcomes (work related stress), work engagement and organisational outcomes which were presented in the review and will be assessed in the empirical study as outcomes. In relation to the investigations of different models in the review, the most suggested

model is the JDR model, which clearly presents the correlation between all factors that influence personal and organisational outcomes. Regarding the tools, there were diverse tools that emerged from the literature testing the dependent and independent variables and the selection for empirical study based on specific criteria.

3.7.1 Next Steps

There is a significant gap in the literature relating to the important factors which influence the individual and organisational outcomes in Saudi nursing faculties. Therefore, there is a need to understand how to use job resources and personal resources and manage demands to reduce negative sequences on outcomes and improve the organisational outcomes in a Saudi context.

The planned design will be a mixed method study. It is likely to be a quantitative cross-sectional design recruiting several governmental nursing colleges across the kingdom of Saudi Arabia to assess the factors influencing the key outcomes identified in the reviewed studies. It may assess the job demand factors as the negative side of the JD-R model that also have a bad influence on stress outcomes, and ultimately influence the organisational outcomes. In addition, it may investigate factors such as personal resources and job resources as the positive side of the JD-R model that have a positive influence on increasing work engagement and commitment that ultimately influence the organisational outcomes positively.

The second step is likely to be established through a qualitative design to fill the gaps in the research problem and for in-depth interpretation of the participants' perceptions in relation to the problem and explore other factors that might influence their intention to remain. This approach may also identify solutions and give suggestions to improve the academic work environment. This part may be conducted with a small number of participants, maybe using focus groups.

Regarding which variables may be measured in the empirical study, it is likely to use the important JD, JR, PR variables that emerged from the literature reviews from the Western and Middle East results, guided by the theoretical framework. The independent variables that were mentioned most in the review are job demands (e.g. workload, workaholism, role conflict). Additionally, job support, autonomy and pay are job resources which are mentioned in both western and Arabic literatures, as well as emotional intelligence, and possibly self-efficacy as a

personal resource. Most of the dependent variables that emerged from the review include both stress outcomes (e.g. burnout, job satisfaction), and commitment/work engagement, together with intention to remain, as the main problem of organisational outcomes.

The Job Demand-Resource Model (Bakker & Demerouti, 2014) is the most proposed model to use in an empirical study to explore job demands, personal resources and job resources. This will help to predict Saudi nursing faculties' emotional and organisational outcomes. The JD-R model helps to delineate important variables, presents relationships among the variables, and directs interpretations of findings regarding a valid framework. It has a clear pathway to cover the positive and negative sides of the correlation between variables and presents a clear structure of all the dependent and independent variables. Participants are likely to include all academic nursing faculty members who are affiliated to the chosen governmental colleges in Saudi Arabia that fit the applied inclusive criteria.

The reviewed studies were comprehensive regarding the tools, covering all the independent variables and dependent variables. The measurements and instruments are likely to be chosen from specific criteria to select the most frequent ones, supported by a theoretical framework, and possessing an acceptable psychometric adequacy in addition to the tools that are relevant to the culture of the target population. The ability to access the tool is considered to be an important criterion for deciding to use a tool through contacting the author or using the tools that are available for any researcher with free permission to use.

The criteria for assessing the tools in order to choose the applicable ones in the empirical study will be addressed through answering the following questions:

- Are the tools covered by the proposed predictors and outcomes?
- Do the tools have demonstrated validity and reliability?
- Are the tools supported by a theoretical framework?
- Are the tools suitable for Arabic culture?
- Are the tools accessible?

The plan for selecting the tool to use in the next step, the four tools that emerged and were accessible were: MBI for burnout, JDI for job satisfaction, UWES for work engagement, and intent to stay scale for ITR (see Table 3.6). In addition, there were suggested tools as an alternative for other tools which could not be accessed. The QEEW2 measure is suggested, as following all the previous selected criteria, it covers most variables of study (JD, JR, commitment) and is based on the JD-R model. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) tool also achieved all the criteria and is based on the JD-R model. Personal resources might be measured by the Emotional Intelligence scale (TEIQue-SF) (Petrides, 2009) which emerged from the scoping review, as well as the Generalized Self Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995). These four tools need to be checked for access for use in empirical work.

Chapter Four – Methodology and Study Design

4.1 Introduction

This chapter discusses both the methodology and the research approaches utilised within this study, as well as providing justification for the decisions taken. It starts by discussing the philosophy and paradigms, including the three types of philosophical paradigms: positivism, interpretivism, and pragmatism that are based on the three main components: ontological, epistemological, and methodological, that guide the research procedure. The selection of the pragmatic paradigm is discussed as the most applicable research design in this study, with evidence and justification for this selection taken from Cresswell (2007). The next section talks about why the mixed methods design was adopted for this study, followed by discussing the three mixed methods approaches (triangular, exploratory and explanatory) and the reasons for choosing a sequential explanatory design. The strengths and challenges of this design and their application in this study will also be discussed. In addition, the integration process between the quantitative and the qualitative phase of this study is discussed. A general overview of the research process applied across the three phases of the study (Phase 2: pilot study, Phase 3: quantitative study, and Phase 4: qualitative study), is presented, along with the approach taken for ethical approval. Significantly, this chapter focuses on the selected methodology and study design and concludes with a brief overview of each phase. Within the subsequent chapters the methods, including the sampling, setting, recruitment strategies, methods for data collection and analysis, will be described in detail for that phase (see Chapters 5, 6 and 7).

4.2 Methodology

Research methodology is an essential part of any study which helps to confirm the consistency between the methods decided upon, and the techniques and philosophy. One of the techniques of research methodology structure is based on the theoretical concept of the “research onion” suggested by Saunders et al. (2016). This presents an explanation of the core layers or steps that need to be considered in order to articulate an actual methodology (Raithatha, 2017). The research methodology starts by allocating the main philosophy, choosing approaches, methods and

strategies, as well as specifying time horizons, which all together take the research to the research design stage and key techniques and procedures of data collection and analysis. Figure 1 shows how Saunders et al.'s approach was applied in this study (see Figure 4.1).

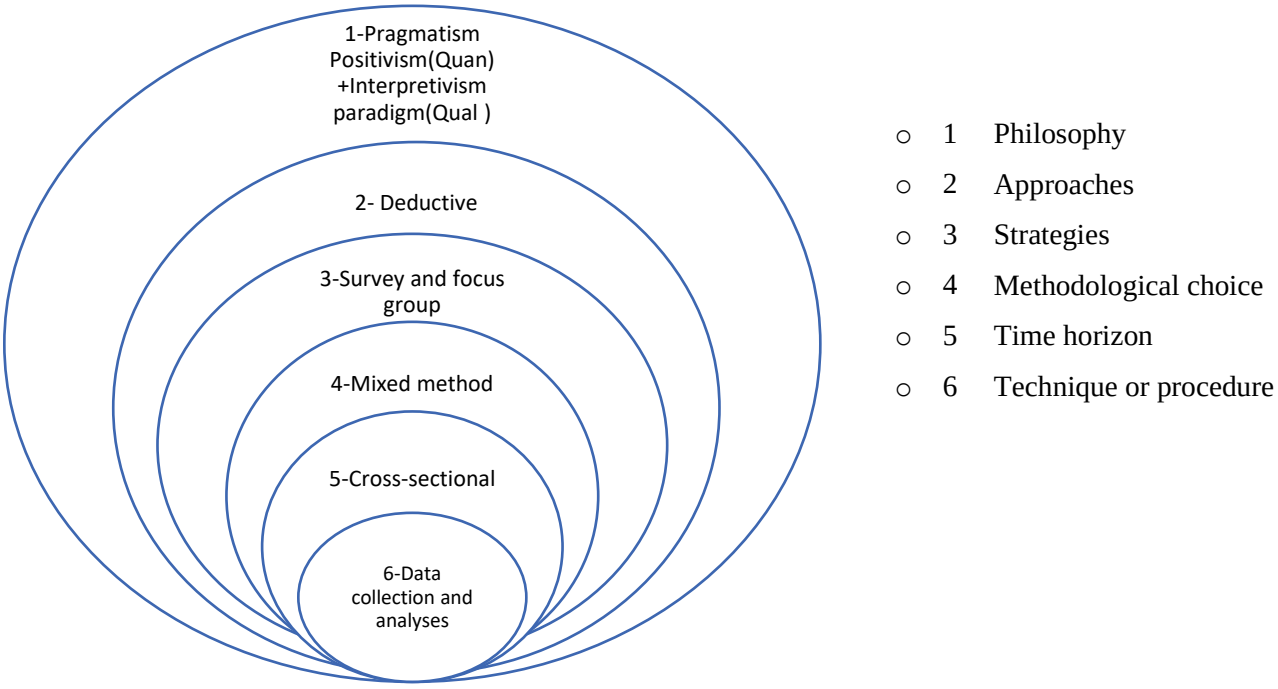


Figure 4.1: Research Structure using Onion Layers.

The methodological structure of this study is summarised below in line with the six layers suggested by Saunders et al. (2016); some details of each are provided in later sections of the chapter, including the rationale for these decisions.

Philosophy: Pragmatism was chosen as the main philosophy appropriate for this study as a mixed method study, because both a positivist and an interpretivist position were to be adopted. This point of philosophy will be discussed in detail in the following section.

Approaches: A deductive approach was applied for this study because there was an existing theory to be tested, that is, this study was based on the JD-R model which was to be tested in the Saudi context.

Strategy to collect and analyse data: A cross-sectional survey that included a questionnaire representing the key variables that were identified from literature reviews and were aligned with the chosen theoretical model. Focus groups were used in this study to help understand and explain the results from the cross-sectional study.

Methodological choice: A mixed method study was planned which incorporated both quantitative and qualitative elements.

Time horizons: The timeframes for this study were planned to enable the collection of data at two specific points in time: first the collection of quantitative data then, subsequently, the generation of qualitative data.

Techniques and procedures: This included data collection, the recruitment strategies, selecting the sample, applying the questionnaires' content, conducting the focus groups interviews, and analytic processes.

4.2.1 Research Philosophy and Paradigm

The understanding of the philosophical paradigms will help the researcher to implement a philosophical view that shapes and informs the research strategy and methods to be employed (Creswell, 2009). A paradigm is defined as the function of how the researcher analyses the development and nature of knowledge of the study. Paradigms are based on three main assumptions or components (Creswell & Clark, 2011): ontological (philosophical foundation for performing research), epistemological (strategic/methodological justification for performing research), and methodology for the procedure of doing research (i.e., collection of data and analysis process).

Creswell (2009) discusses three different paradigms: positivism, interpretivism, and pragmatism, and emphasises the importance of justifying the adoption of a specific paradigm. Positivism and interpretivism commonly represent the two main opposing paradigms with regards to the real world (Clark et al., 2008). That is, positivism is an objective approach which is based on facts, statistics and quantitative data, which has been established from the empirical view of the study problem utilising theory to create research questions or hypotheses which need to be tested. The aim is to find general directives, relations and causal statements about a phenomenon using

specific methods and tools (Guba & Lincoln, 1998). Moreover, positivism aims to provide explanation rather than in-depth interpretation (Creswell, 2009). In contrast, interpretivism relies on people's subjective interests and concentrates on meanings. Interpretivists assume that the best way to understand peoples' experiences is to ask them about their views, perceptions and beliefs, thereby gaining access to subjective understandings from a broad range of people (Cresswell, 2009). In addition, interpretivists regularly use qualitative research approaches for focusing on understanding social performance and its meaning in more depth, rather than concentrating on testing it. The data that is generated is dependent on the interaction between the researcher and the participants, and is interpreted through qualitative techniques (Creswell, 2009).

Pragmatism, as the philosophical foundation for mixed methods research, was proposed by Creswell (2013) to enable the research to benefit from both approaches in order to establish a more complete understanding of the problem (Cresswell, 2009; Tashakkori & Teddlie, 1998). Pragmatism research philosophy relies on the research questions being the important determining factor of the research philosophy. Pragmatism has been viewed as a paradigm arising out of actions, circumstances, and outcomes, rather than antecedent situations (Cresswell, 2009). Mixed methods research has been associated closely with pragmatism as an appropriate philosophy that rejects the traditionally enforced choice between quantitative and qualitative methods and allows researchers to combine methods in order to best answer their specific research questions (Creswell, 2003).

Having considered these three different paradigms, the pragmatic approach has been adopted as the paradigm for this study. The pragmatic choice suits this study's aim and questions to identify the factors and variables that influence the Saudi nursing faculty's intention to remain. The pragmatic focus is on the problem and understanding the problem, and in this study the research focus is on the problem of intention to remain and identifying the variables that influence the decision. This problem will be addressed by performing a quantitative element (Phase 3) as well as understanding the participants' views around the problem, and aiding understanding of the results from Phase 3, by performing the qualitative element (Phase 4). The main justification for the selection of the pragmatic type is being able to integrate both the quantitative and qualitative elements together. The aim and research questions could not address this through using either positivism or interpretivism; therefore Questions 1 to 4 need to be addressed by positivism to test

the association of variables and identify potential outcome predictors. Questions 5 and 6 need to be addressed by interpretivism, in order to to gain a deep understanding and interpretation of the study problem in the Saudi context, because there were limitations in the Saudi literature around this problem. Thus, the pragmatic approach was able to incorporate the answers to all the 6 research questions as the complete research questions were mentioned in Chapter Three.

Saunders, Lewis and Thornhill (2012) stated that, when conducting research, each researcher follows important views on how they view or perceive the world and these views and assumptions will affect the research strategy and methodology chosen by the researcher. The pragmatic paradigm was informed and shaped the nature of the problem regarding this research and in turn impacted on the ontological, epistemological and methodological selections made, as explained in Table 4.1.

Table 4.1: Applying the Pragmatic Paradigm, based on the Assumptions of Research Philosophy

Assumptions of research philosophical paradigm	Applied the pragmatic paradigm in the study
Ontology (What is the nature of reality?)	Reality could be both objective and subjective. In this study, the objective applied by quantitative part that is controlled by nature that can be realised through the experience of people around the problem of intention to remain (phase 3). For the subjective, reality is internally experienced and socially structured through interaction and interpretation and is based on the perceptions, views, and the explanations of people in their social context and that applied through the focus group (phase 4).
Epistemology (How do you create the knowledge?)	The knowledge is creating from interplay between subjective and objective. Knowledge that exists can be obtained and explained by the study issue and the possibility to predict their occurrence and this achieved by quantitative part, how the knowledge come from the interpretation of participant of the objective knowledge (result of questionnaires) in a Saudi context. Additionally, knowledge could be understood in the subjective way of people relating their perceptions into their social context and this achieve by focus group.
Methodology (How is knowledge obtained?)	Combination of different techniques used by the researcher to explore and identify the different situations. The methodological questions answer the questions about choice of research methods and data collection instruments employed. In this study, it is the combination of survey and focus groups.

4.2.2 Mixed Method Design

Mixed methods research is defined by Burke Johnson and Onwuegbuzie (2004:17) as: *"…the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study."* Tashakkori and Creswell (2007, p.4) extended this definition to incorporate data analysis, interpretation and implication as important elements of a mixed method study. Thus, the combination and integration of approaches that is applied across all elements of the research process. This in turn avoids the problem of both quantitative and qualitative elements as stand-alone in separated studies.

The major types of mixed method designs, as proposed by Creswell (2006), are: Triangulation Design, Exploratory Design, and Explanatory Design. The Triangulation Design is the most common approach (Creswell et al., 2003), and this design is applied when a researcher plans to clearly compare and contrast statistical results of a quantitative phase with the findings of a qualitative phase. Researchers can conduct the quantitative and qualitative phases at the same time and with equivalent weight. The Exploratory Design is used when there is a need to explore,

for example, developing tools, identifying variables, or when there is no theoretical framework. This design consists of two phases, as the researcher starts with a qualitative phase to explore a phenomenon, and then develops the quantitative phase based on the results of the qualitative approach by creating an instrument, or identifying variables (Creswell et al., 2003).

The last type of mixed method design is the Explanatory Design (also known as the Explanatory Sequential Design), which includes a two-phase mixed method element; this is the design used within this study. This design starts with the first phase of collection and analysis of quantitative data, and subsequently the second phase of collection and analysis of qualitative data. It gives greater emphasis to the quantitative method as a main part rather than the qualitative method (QUAN—»qual). This design is typically utilised when a researcher is seeking to explain specific quantitative results that need additional clarification, such as statistical differences between groups and unexpected or surprising results (Creswell et al., 2003). For the quantitative approach, a cross-sectional survey was chosen as the first element of the design for data collection and analysis. For the qualitative phase, focus groups were conducted, and in this type of a design, participants will be purposefully sampled on the basis that they should be able to offer insights into the quantitative results (Creswell, 2006).

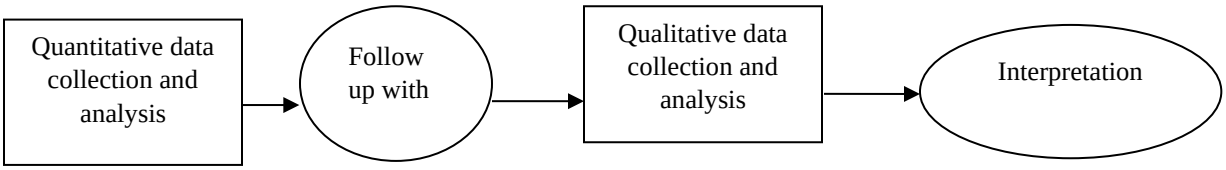


Figure 4.2: Explanatory Sequential Design (Creswell & Clark, 2010)

4.2.2.1 The Strengths and Challenges of using the Explanatory Sequential Mixed Method Design

This design has advantages for a novice researcher as it is conducted in a straightforward manner, with the researcher implementing the two methods in separate phases and collecting only one type of data at a time. This also means that it is easier for only one researcher to carry out the research rather than a team of researchers being required to implement the study design. Using multiple methods will have the important benefit of generating a more in-depth understanding of

the phenomenon (Creswell et al., 2003). In this study this design was applicable and easier for the researcher as the only one reasonable for the study and thus can enable her to manage conducting the two methods in separated phases.

Despite the advantages of this approach, there are some related challenges. This design entails quite a lengthy time to apply the two separate phases. Other challenges of this design are that the researcher had to select participants with very specific criteria from the same population for the two phases, which might have decreased the sample size. In addition, it could have been difficult to obtain internal review board approval for this design because the researcher was unable to specify how many participants exactly would be recruited for the second phase and what result that raised from quantitative to build on the next type of qualitative. The researcher needed to wait until the results of the quantitative study were completed to decide which aspects needed explanation and that needed time (Creswell & Clark, 2011). In this study, the researcher took time to perform the two phases in in the order suggested by Creswell & Clark (2011), i.e. recruitment and data collection and analyses for the cross-sectional study, and then recruitment, data collection and analyses for the focus groups. Ethical approval for each phase was obtained twice, from the two separate institutions, UOD and KSU.

4.2.2.2 Integration Process in the Mixed Method

Integration of the quantitative and qualitative data can strengthen research by offering a more holistic understanding of a topic or phenomenon (Bryman 2006; Creswell & Clark, 2011). Within this study, the integration of the quantitative and qualitative results was conducted at three levels: at study design level, method level, and interpretation and reporting level. The integration process is presented in the following diagram.

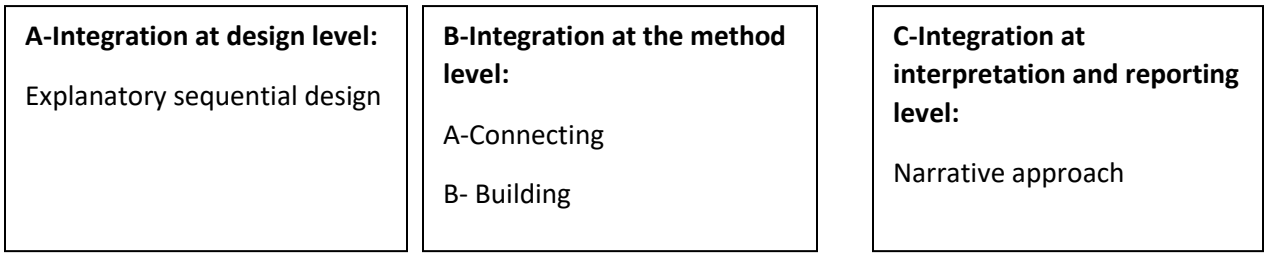


Figure 4.3: Integration Levels of Mixed Method using the Creswell Approach (Creswell et al., 2011)

Integration at design level was undertaken by adopting a sequential explanatory type design, that is, by collecting and analysing the quantitative data and subsequently using these results to guide the qualitative data collection and analysis (Creswell, 2014). Meanwhile, integration at methods level was achieved by recruiting participants to the focus groups (across two of the five settings used in the quantitative phase) from the population of participants who responded to the survey; and by engaging the recruitment champions used in the quantitative phase to assist in the recruitment process for the qualitative phase. In addition, connecting and building methods were utilised to bring the two data sets together by utilising the quantitative results to inform the development of the topic guide used within the qualitative phase. This was achieved by presenting key results of the survey (data collected in Phase 3) back to the participants who took part in Phase 4; the discussions that took place within the focus groups offered further interpretation of key results.

Even though the qualitative results and quantitative findings are reported initially in different chapters of this thesis, integration at the interpretation and reporting stage was achieved by bringing the qualitative results and quantitative findings together in the 'Discussion' chapter. A narrative approach was identified as being the most applicable at the interpretation and reporting stage of this study (Creswell et al., 2011). Following the focus groups, qualitative analysis was undertaken of the discussions that focused on participants' responses to the questions - how they framed their responses and represented their arguments of agreement or contention, to whom and in what circumstances, and what exceptions they identified - thereby providing a more complete understanding of the whole data set. In the final chapter, the results from both phases of the study are combined by answering the research questions more fully, giving a more robust and meaningful overview of the research problem. Within this chapter, the integrated findings of the study are further considered in light of previous research and, ultimately, these integrated findings form the basis of recommendations for improving ITR in HEs in a Saudi context.

When a study has more than two phases, it can be difficult to visualise the sequence of the phases and the associated procedures and products. Graphically presenting how the phases are integrated has been recommended as a useful approach (Morse 1991; Tashakkori & Teddlie, 2003; Creswell et al., 2003; Creswell, 2004). Therefore, for this study, the researcher applied the

requisite guidance to produce a clear visual display of the mixed method process and integration (see Figure 4.4).

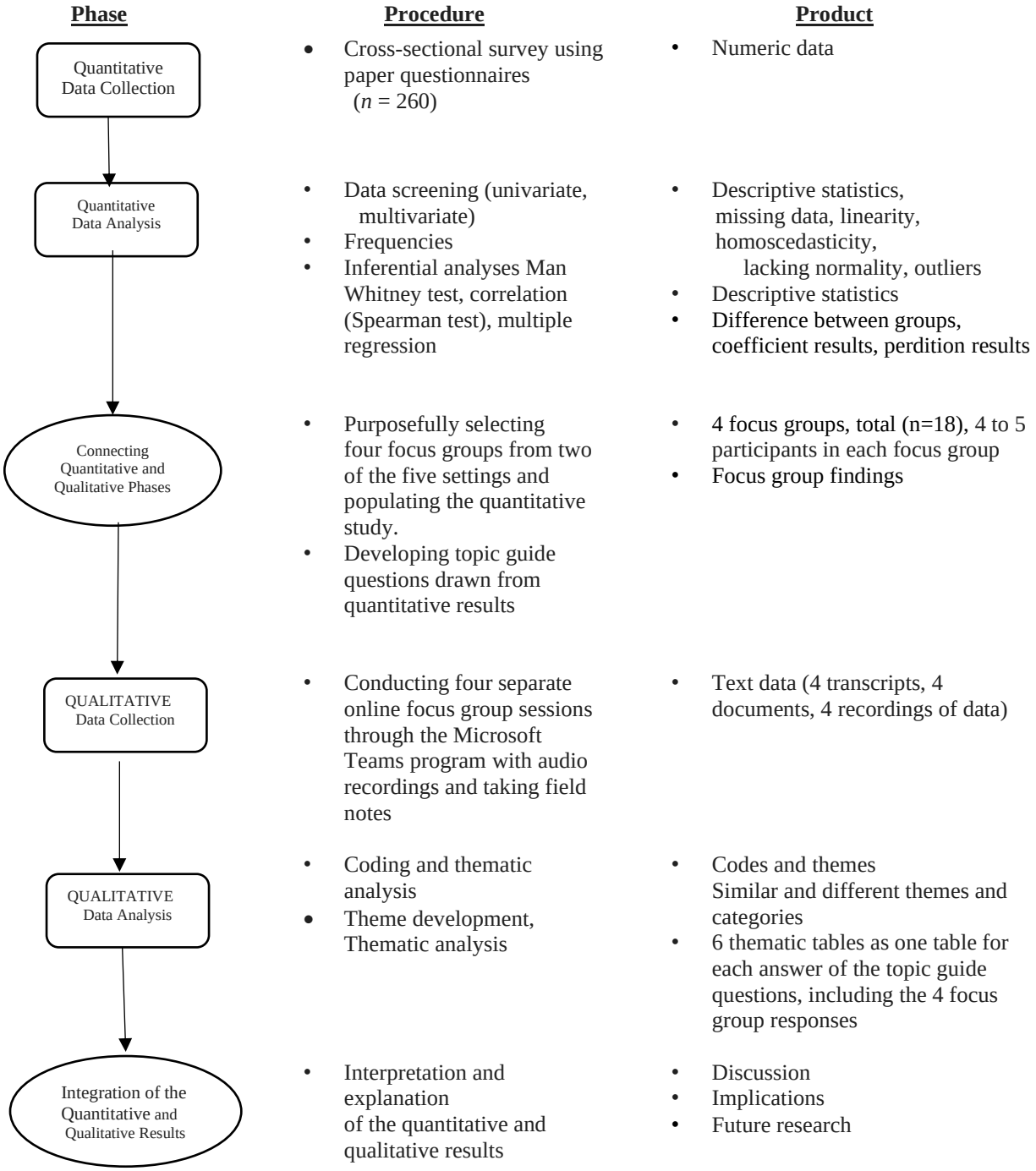


Figure 4.4: Visual Display Process and Integration in Mixed Method Sequential Explanatory Design

4.3 Conceptual Framework of Study

Strong evidence indicates that exposure to stressful working conditions is a major threat for the health of workers, wellbeing, and engagement which in turn can influence individual and organisational outcomes. Much of this evidence has accumulated over the past two decades and is based on different work-related stress models and relates mainly to how demands and resources influence the work stress condition (Anshel et al., 2016).

This study is underpinned by a model of work-related stress. There has been increasing interest in work-related stress across a range of professions and occupations primarily because the consequences for both the individual and an organisation can be significant (Schauffeli, 2017). Two main theoretical approaches have influenced how work-related stress is perceived and identified. These are Transactional and Interactional models. Both models explain stress as a process and a balance between demands (i.e. the stressor), and resources (an individual's ability to cope or deal with the stressor). The transactional model of stress and coping was developed by Lazarus and Folkman (1984) and is explained by how an individual uses their resources to manage and respond to a stressor. In this model, it is the stressor itself that is the focus of this approach and views the process as a 'transaction' between the person, the stressor and the environment. Whether stress occurs is therefore a balance between these. Stress occurs when the demands from the stressor are sufficiently high to exceed resources.

Interactional models are also about a stressor, an individual response and the interaction with the environment, but are more about how a person appraises the stressor rather than the stressor per se. This involves the individual appraising the level of threat, and whether they have the resources to deal with the threat (Lazarus, 1987), and as a model has become more accepted. There are three main interactional models: Demand-Control(D-C) model (Karasek, 1979), The Effort-Reward Imbalance (ERI) model (Siegrist, 1990) and the Job Demand-Resource model (Bakker & Demerouti, 2011). The Karasek's Demand-Control model (1979) is essentially about how much control or influence an individual has in decision-making within their role. High job demands with low decision-making will lead to negative consequences. When the work condition is characterised by low control and high demand it leads to health problems, such as heart disease and an increased rate of absenteeism (Kain & Jex, 2010).

The Effort-Reward Imbalance model (1990) was developed by Siegrist et al. and also focuses on job demands or effort but links them with rewards which can be pay, career development and job security (Niedhammer et al., 2004). When high demands or efforts are met with low resources, i.e. rewards, then over-commitment occurs leading to exhaustion and poor health outcomes, particularly for an individual with poor coping skills. Both these models have been extensively used and both acknowledge the interaction between demands and resources that influence stress outcomes and have been criticised as being inflexible with defined questionnaires which are limited to the model variables. Thus, they tend to ignore other key factors such as individual characteristics and organisational outcomes (Ostry et al., 2003).

To address the criticisms of the D-C and ERI models, the theoretical framework underpinning this study is the interactional Job Demand Resource (JD-R) model (Bakker & Demerouti, 2011). The JD-R model was initially developed about fifteen years ago to recognize work-related stress and employee burnout (Schauffeli, 2017). This flexible model overcomes some of the disadvantages of other stress models as it can assess the job characteristics that influence both individuals' well-being and work engagement/commitment and organisational outcomes. Thus, it is not limited to just the influence on individuals. The JD-R is basically a balance model that postulates that the relative balance of demands and resources at work can be either useful or harmful (Bakker et al., 2017). It provides useful indicative information for improving working conditions and employee well-being and productivity. This model has been shown to be applicable to a diversity of job types (Bakker et al., 2017). JD-R model allows for flexibility in choosing the job demands, job resources and personal resources based upon the specific setting or situation of work being studied and it does not have a pre-selected set of tools. It has two different pathways that relate demands with negative outcomes such as burnout, with the second pathway relating resources with the motivational outcomes. As such the model allows exploration of different interactions across and between variables (Schauffeli, 2017).

The JD-R model emerged in this study from the scoping reviews and the systematic review as potentially the most appropriate model. It will be tested in a pilot study and applied in the empirical study, to provide a clearer identification and understanding of the factors that influence intention to remain. This model is used to guide this study and helped to identify the key variables

identified in the Scoping and Systematic reviews and select suitable measures to test the relationships across and between these variables (see Figure 4.5).

The model categorises the main emerged variables or potential predictors in three ways: job demands, job resources, and personal resources. Job demands were operationalised as workload, workaholism, and role conflict, job resources as support, autonomy and pay, and personal resources as EI, and self-efficacy. Stress outcomes were operationalised as burnout, job satisfaction and well-being, and work engagement/commitment as vigour, dedication and absorption, and organisational outcomes as intention to remain. The study will test both the negative and positive pathways and test a range of interactions to explore whether job and personal resources buffer the negative effect of job demands on stress outcomes.

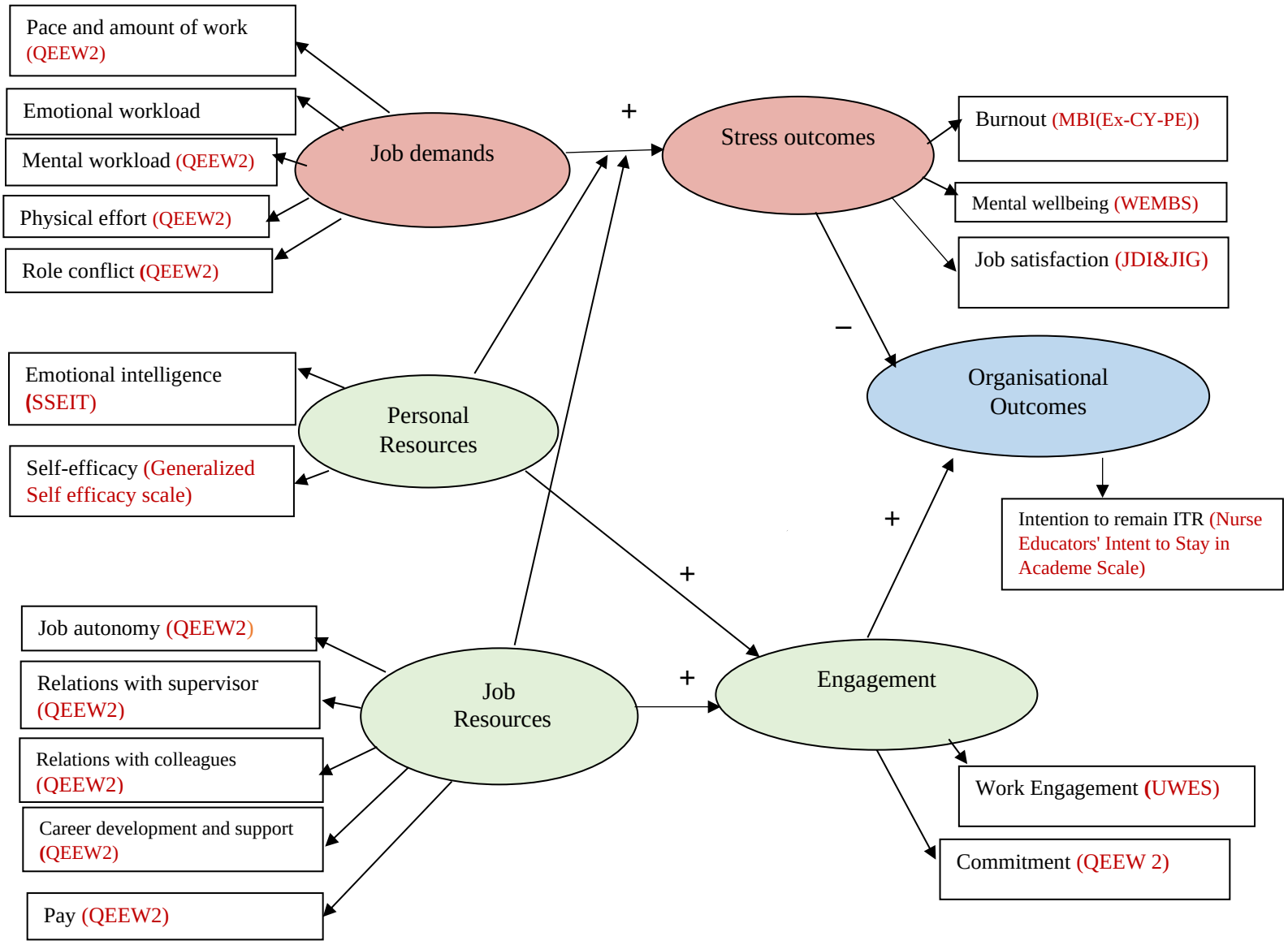


Figure 4.5: JD-R Model (Bakker & Demerouti, 2011)

4.3.1 Conceptual Definition of the Variables and Outcomes of the JD-R Model

Conceptual definitions are the deep meaning of the study concepts which are based on the theory. The variables of the study were conceptually defined as the following, while the operational definitions will be discussed in the pilot and quantitative chapters**.**

Job demands are defined by Demerouti et al. (2001, p.501) as *"aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs,"* i.e. bad consequences at work that elevate stress. Job demands might also be classified as hindrances and challenges (Bakker & Sanz-Vergel, 2013). Hindrances are defined as stressful demands that can hinder personal wellbeing, satisfaction, and goal achievement such as role conflict. In contrast, challenges are stressful demands that can motivate personal wellbeing, growth and achievement, such as a high workload and time pressure. Experience of both types of demands makes individuals feel tired, but not essentially stressed (Barker & Sanz-Vergel, 2013). The main job demand elements that emerged were workload, workaholism and further role conflict.

Workload is defined as the amount of work an individual needs to do a task and can be quantitative (the amount of work to be done) or qualitative (the difficulty of the work) (Demerouti et al., 2001). Workload can be classified as a physical, emotional, or mental load sustaining the need to accomplish work. Mental workload can be defined as "the amount of cognitive capacity required to perform a given task", while emotional workload refers to the feelings and expressions required to fulfil the emotional requirements of the job. Physical workload means the physical effort that is required in muscle or body energy to perform the task (Bakker & Sanz-Vergel, 2013).

Workaholism was defined as "the compulsion or the uncontrollable need to work incessantly" (Oates, 1971, p.7). Since then, the concept of workaholism has been studied by many researchers, to define it as an addiction to work (Ng, Sorensen & Feldman, 2007; Porter, 2006; Robinson, 2000). Lately, to be more specific in definition, Van Veldhoven (2015) identified workaholism as pace and the amount of work when the individual has much work and needs to work extra hard and hurry to complete the task.

Role conflict was identified as one of the main elements to hinder workload. Role conflict is defined as the simultaneous occurrence of two or more role pressures, so that the compliance with one makes it more difficult to comply with the other (Rizzo, House & Lirtzman, 1970).

Job resources are defined as "aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; and (c) stimulate personal growth and development" (Demerouti et al., 2001). Job resources enhance the employee's energy and make them feel engaged, which, in turn leads to better organisational outcomes. Examples of job resources are job autonomy, a good relationship with colleagues, support, and payment.

Autonomy is one of the job resource elements and was defined by Black & Deci (2000) as a form of voluntary action, stemming from a person's interest and with no external pressure.

Relationship with supervisor is defined as a good atmosphere between the employee and the supervisor, including respect, trust, and open communication, free from work conflicts. The relationship between colleagues means building a positive, healthy relationship with the provision of help and assistance if needed (Gagne & Deci, 2005).

Career development and support are improvements to an employee's career which is appropriate to the requirements of the organisation, while **Payment** can be defined as an amount paid; compensation for the work done (Driver et al., 1988).

Personal resources refer to an "individuals' sense of their ability to control and impact upon their environment successfully" (Xanthopoulou et al., 2007). Examples of personal resources are emotional intelligence and self-efficacy.

Emotional intelligence has been defined by Mayer and Salovey (1997) as "the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings, and the ability to regulate emotions to promote emotional and intellectual growth" (p.10).

Self-efficacy "people's beliefs in their capabilities to produce desired effects by their own actions" (Bandura, 1997, p.7).

In relation to **Stress outcomes**, the JD-R model explains occupational stress via two core processes (Bakker & Demerouti, 2007). The strain or stress process is the first process and refers to the additional exertion required by an employee to manage (usually negative) job demands. Persistent exposure to strain is associated with impaired health and mental wellbeing, and burnout. Stress or strain outcomes include three main elements as negative sequences of job demands (burnout, mental wellbeing, and job satisfaction) (Brough et al., 2013).

Burnout is defined by Maslach (1996, p.5) as a psychological syndrome involving emotional exhaustion, cynicism, and a diminished sense of professional efficacy that occurs among various professionals who work with other people in challenging situations. Emotional exhaustion (EX) means feelings of being emotionally overextended and exhausted at one's work; Cynicism (CY) is indifference or a distant attitude towards one's work, and Professional Efficacy (PE) means feelings of competence and successful achievement in one's work.

Mental wellbeing is defined as a positive state of psychological and emotional health; when a person is capable of performing cognitively and emotionally in a way that is productive and achieves a task (Adler & Seligman, 2012).

Locke (1976, p.1300) defined J**ob satisfaction** as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience".

In terms of **Motivational outcomes (Work engagement/Commitment)**, the second process of the JDR model is a motivational process based on the availability of personal and job resources that directly assist an employee to perform their job and to be engaged and committed to their work (Bakker & Demerouti, 2007). Therefore, motivation can be described as work engagement and commitment.

Work engagement is defined as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli & Bakker, 2002, p.11). Vigour refers to a high level of energy and resilience during work; dedication refers to a sense of enthusiasm, pride, challenge and significance at work; and absorption refers to being happily engrossed in the work at hand to the extent that time passes quickly.

Commitment has been defined as "the strength of an individual's identification with and involvement in a particular organisation" (Porter et al., 1974, p.604). A person who is high in organisational commitment wants to (a) stay with his or her organisation, (b) work for the good of the organisation, and (c) adhere to the prominent values of the organization (Porter et al., 1974).

4.3.2 Organisation Outcomes - Intention to Remain (ITR)

Both two processes of stress outcomes and motivation predict the organisational outcomes in terms of intention to remain. Intention to remain defines as an employee's willingness to stay in his or her organisation (Chew & Chan, 2008).

4.4 Aim and Research Questions

The aim of this study is to identify the individual and work environment factors influencing the well-being, engagement and intention to remain among the Saudi nursing faculty.

The research questions to achieve this aim were framed as below-

RQ1: To what extent do the demographic characteristics of nursing faculties influence stress outcomes (burnout, mental wellbeing, and job satisfaction), work engagement and intention to remain?

RQ2: How are western conceptualisations of job demands, job resources and personal resources understood in nursing faculties in HEs within Saudi Arabia?

RQ3: Which personal characteristics of job demands, job resources and personal resources predict or are associated with: a- Stress outcomes (burnout, mental wellbeing, and job satisfaction) (the negative arm of the JDR model), and b- Work engagement and commitment (the positive arm of the JDR model)?

RQ4: Which stress outcomes (burnout, mental wellbeing, job satisfaction) and Work Engagement/Work Commitment are predictors or associate with organisational outcomes of Intention to Remain (ITR) in nursing faculties within this setting?

RQ5: How do nursing faculties interpret the results of the cross-sectional survey within the context of HEs in Saudi Arabia?

RQ6: What recommendations can be made about improving ITR in HEs a Saudi context?

These questions have been addressed by employing a 4-phased mixed method research design.

4.5 Overview of the Four Phases of Study

The main problem of this study is the concerns of both the retention of nursing faculty staff and the lack of research related to this problem within a Saudi Arabian cultural context (Kumar, 2016). This study, therefore, aimed to identify the personal and work environment characteristics associated with the intention to remain in higher education (HE) nursing facilities within Saudi Arabia.

The research aim and problem have been addressed through a four-phase study of mixed method design. For each phase the methods will be discussed in detail independently in the appropriate chapter (Chapters Five, Six and Seven). Ethical considerations are also discussed in each chapter. Phase 1 included the review elements (both scoping reviews and the systematic review) presented in Chapters Two and Three. The main findings from these reviews suggested that emotional intelligence and job satisfaction are important factors related to intention to remain. However other factors emerged along with a potential model of work-related stress. Phase 2 was the pilot work, including two elements (a- cognitive testing and b- pilot testing), as presented in Chapter Five. The purpose of the pilot study was to test the recruitment process, and using cognitive interviews and a small sample survey, explored understanding and appropriateness of the proposed questionnaires. Findings from this phase presented in Chapter Five informed Phase 3 as a quantitative cross-sectional survey. This phase assessed levels of job demands, job resources and personal resources and their association with and prediction of stress outcomes, work engagement and commitment. The latter were then tested to determine association and prediction of intention to remain. Findings from this survey are presented in Chapter 6 and informed the topic guide for the focus groups. Phase 4 is a qualitative approach using online focus groups to explain the survey results by participants. Focus group participants were also asked to identify interventions or actions that might help to increase work engagement and intention to remain in HEs in Saudi Arabia, and findings are presented in Chapter Seven (see Figure 4.6). The final element of integrating findings will be presented in Chapter Eight, with discussion, recommendations and conclusion.

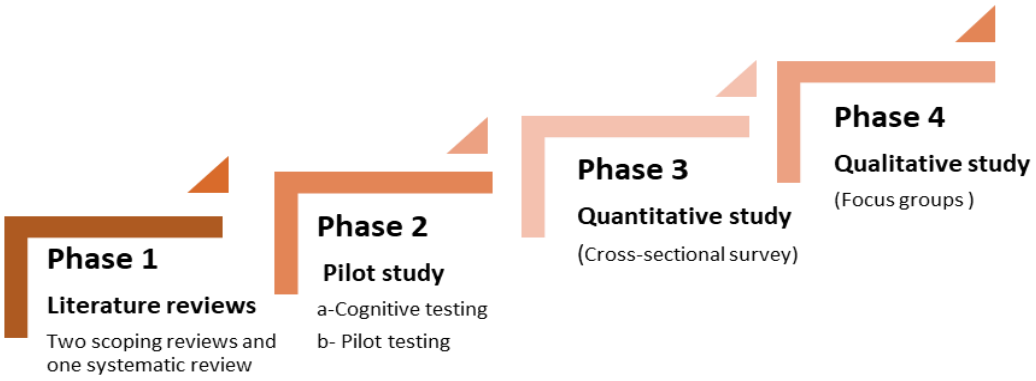


Figure 4.6: The Four Phases of the Study

4.6 Conclusion

The justification for this study was the lack of research on the intention to remain in nursing faculties in the Saudi context. To address the research questions, a three-phase mixed methods approach of an exploratory, sequential design will be applied. Integration occurs at all levels, including design, methods, results and reporting. The study is underpinned by the Job Demand-Resources model, a flexible model of work-related stress that allows testing a range of potential predictor and outcome variables related to job demands, job resources, personal resources, stress outcomes, work engagement/commitment and intention to remain. Recruitment processes, questionnaire understanding, and appropriateness will be tested in a pilot study prior to a main, cross-sectional survey. Focus groups will inform the understanding of the results and the study concepts. Finally, recommendations to improve staff retention will be made.

Chapter Five – Phase 2: Pilot Study

5.1 Introduction and Background

Saudi Arabian higher education institutions (HEIs) are facing major problems in retaining faculty members; this is particularly true for the Colleges of Nursing. Two scoping reviews and one systematic review identified a range of personal and work-based factors associated with intention to remain, although these were mainly related to Western literature. Within the Middle East, certain studies have referred to the problem of intention to remain; none, however, have been specific to Saudi Arabia. Consequently, there is a significant gap in the literature in regard to this issue within Saudi Arabian faculties. The main problem concerns both the retention of staff and the lack of research within a Saudi setting.

A range of issues and potential theoretical models emerged from the general literature in relation to the problem of intention to remain. These issues or variables can be represented within work-environment characteristics by job demands, personal resources and job resources, which in turn can influence individual and organisational outcomes. The Job Demand Resource JD-R model encompasses work characteristics and personal outcomes such as (stress outcomes, well-being, or job satisfaction), and organisational outcomes (intention to remain) (Bakker & Demerouti, 2007). The systematic review revealed this to be a potentially appropriate model. However, its application in the context of Saudi Arabia still needs testing.

Different concepts about work environment factors and outcomes were identified in the literature, which need to be assessed. The main concepts that emerged were: job demands (e.g. workaholism and work conflict), personal resources (e.g. emotional intelligence, self-efficacy), job resources (e.g. support, pay and autonomy), as well as individual outcomes (burnout, well-being, job satisfaction), work engagement, and organisational outcomes (intention to remain). A range of measures addressing these key concepts had been used within the Middle East, while others had not been applied in this context. Moreover, the systematic literature review showed that perceptions of work environments may operate differently in Saudi Arabia, which is why it is particularly important to establish that participants understand the measures and their individual

items (Collins, 2003). Therefore, it is essential to pilot the proposed measures among the Saudi nursing faculties before applying them within the main, large, cross-sectional study. The pilot study has two main elements, a- Cognitive Testing and b- Pilot Testing, which will be discussed in the sections below.

5.1.1 A-Cognitive Testing

Cognitive testing is a method of interview style that is utilised in questionnaire development in order to evaluate the origins of errors in responses, interpretations and comprehension. This, in turn, guides modification or improvement of the survey questions for the intended audience (Tourangeau et al., 2000; Presser et al., 2004; Willis, 2005). Cognitive testing has commonly been based on the cognitive model which describes how people's perceptions of, or spontaneous thoughts about, situations influence their responses (Tourangeau, 1984). The theoretical structure of the model, when applied to cognitive interviewing, consists of the following: (1) comprehension of the question; (2) retrieval from memory of relevant information; (3) decision processes; and 4) response process.

The purpose of cognitive testing is to: a) test participants' understanding of the study questionnaires' items; b) enable the researcher to examine participants' understanding of research terms; and c) investigate any problems that respondents may have during the completion of the questionnaire (Bowling, 2014). The following are the main questions which need to be addressed for the cognitive testing:

CQ1: Are there any problems in clarity, length, instruction, or sensitive content, in any items of the questionnaires?

CQ2: How well do participants understand the questionnaire items?

CQ3: Are the questionnaires acceptable within the context of Saudi Arabia?

5.1.2 B-Pilot Testing

The pilot test was undertaken to: a) test the acceptability and practicality of measurements within a Saudi Arabian context; b) test recruitment techniques and procedures to enhance

participation (Hundley et al., 2000); and c) test the applicability of the JD-R model in a Saudi setting (Redsell & Cheater, 2001).

The following are the main questions which need to be addressed for the pilot testing:

PQ1: Are the proposed questionnaires applicable for the selected setting (Saudi Arabian Nursing colleges)?

PQ2: Is the approach to recruitment workable or does it require further modification?

PQ3: How well does the Job-Demand-Resources model address the following questions:

a) Which job demands (workload, workaholism, role conflict); job resources (autonomy, support, pay); personal resources (EI, self-efficacy) are associated with stress outcomes (burnout; mental wellbeing, job satisfaction) and work engagement?

b) Which stress outcomes (burnout, mental well-being, job satisfaction) are associated with intention to remain?

c) Is work engagement associated with intention to remain?

d) Are there differences in stress outcomes, engagement and intention to remain between:

   I. Men and women;

   II. Younger and older faculty members;

   III. Faculty members who have less and longer years of experience in this area of work?

5.1.3 Methods

This section describes: inclusion and exclusion criteria; setting of the pilot study; participants, ethical aspects, recruitment of the faculty members; data collection; and the proposed analyses pertaining to the two elements of the pilot study (a- cognitive testing and b- pilot testing).

5.1.4 Inclusion Criteria

Participants are nursing faculty members who: read and write in English; have a teaching load; have an academic ranking (demonstrator or instructor, lecturer, assistant professor, associate professor, professor); hold a BSN, MSN and/or PhD Degree; and have at least 2 years' experience in academia.

5.1.5 Exclusion Criteria

Participants who are non-nursing faculties; those who are unable to understand the English language, who are not academic and do not possess any academic rank; participants who do not have a certificate in nursing; and those who have less than 2 years' experience in academia.

5.1.6 Setting

The setting of the cognitive testing and pilot testing will occur separately to the proposed setting of the main study; therefore, Al-Ghad International Nursing College, Riyadh city (a private college) will be selected.

5.1.7 Participants

Ten volunteer participants who meet the inclusion criteria will be included for the cognitive test. In order to provide useful feedback, a sufficient number for cognitive tests is often 10 participants. The recruited participants will be from different academic ranks to reflect diversity in the population being studied (Willis, 2005).

Sample size for the pilot testing will be calculated as 10-20% of the Phase 3 study (200-400), i.e. 20 to 40 participants will be recruited (Lancaster & Williamson, 2004).

5.1.8 Ethical Aspects

Ethical approval to conduct the current pilot study will be obtained from the University Research Ethical Committee (UREC) at the University of Dundee (UOD) (see Appendix-16), followed by the Institutional Review Board (IRB) Committee from King Saud University (KSU), Saudi Arabia (see Appendix-17). Participants will be informed of their right to withdraw from the study at any time without the requirement to present any rationale.

A participant information sheet will be distributed to potential participants prior to them taking part in the cognitive testing. The voluntary agreement of participants will be obtained via them each signing an informed consent form prior to participating in the cognitive testing interview. Participants will be informed that during the cognitive testing audio recordings will be performed, although they will be able to stop the audio recording at any time if they feel uncomfortable. With a participant's permission, taping will recommence once they have been offered reassurance about confidentiality and feel confident to continue. The personal data of the participants will be protected in accordance with the UK and KSA Data Protection Act Regulations (Convery & Cox, 2012).

Similarly, for the pilot testing, a participant information sheet will be distributed via survey packages to explain the risks and benefits of participation in the study, as well as offering a description of the strategies undertaken to assure participants' anonymity and confidentiality. The pilot research work will be underpinned by the ethical principles of voluntary participation and will ensure that the participants remain unharmed, and that they maintain their right to privacy, anonymity and self-determination. Subsequently, after the participant information sheet has been distributed and potential participants have been given the opportunity to ask any questions by contacting the researcher, the pilot test will be conducted. The completion and return of the questionnaires imply that the participant has consented to be part of the study during the pilot testing and, thus, further written consent will not be sought.

5.2 Recruitment Strategies and Data Collection for Cognitive Testing

The following steps will be conducted in order to identify and recruit the potential participants:

1. Ethical approval will be obtained from the Ethical Committee (UREC) at UOD and subsequently (IRB) from KSU.

2. Official permission will be obtained from the Dean of Al-Ghad International Nursing College, who will be contacted and informed of the process. The researcher will send a letter describing the study.

3. The researcher will recruit two faculty members to be 'champions': one for the female college (for the cognitive element and piloting testing); and one for the male college (for the piloting

testing element only). The researcher will recruit a champion who is interested in being responsible for the distribution of invitation sheets; is able to work independently; possesses good communication skills; and has availability throughout the whole study data collection period; as well as adhering to the data collection process to maximise participant recruitment (Thabane et al., 2010).

4. The female champion will provide the researcher with the potential number of participants who meet the eligibility criteria to be potential volunteers in cognitive testing, in order to prepare the number of participant information sheets and consent forms.

5. Participant information sheets for cognitive testing and a separate envelope which contains the consent form for interview will be distributed by the champion. The participant information sheet explains the study's aims; all the information regarding the study process; the method of returning the consent form; the ethical considerations; and the researcher's contact information (telephone number and email).

6. The champion will distribute the PIS (see Appendix18) and the consent forms (see Appendix 20) to the offices of eligible faculty members offices, one-by-one by the champion, in a closed pack. Local practices of secure mail delivery will be identified and followed.

7. The researcher will provide one box in an available central place in the college (the main staff room) to return the sealed envelopes of consent forms.

8. Potential participants will have two days after the distribution of the participant information sheet and consent form to decide whether or not to take part in the cognitive testing.

9. After the participant decides to become a volunteer in the cognitive testing interview, they will sign and add their contact information to the consent form in order to enable the researcher to contact each one and determine the time and date for the cognitive testing interviews.

10. Participants will place the completed consent forms in the unnamed, sealed envelope, which they will subsequently place in the secured box that is located in the staff room, in order to ensure anonymity.

11. The researcher will meet the champion within her setting at Al-Ghad College, in order to receive the completed sealed envelopes.

12. Each sealed envelope will be coded, giving sequential numbers commencing at 001, 002, 003, etc. The researcher will use the code number selected for each participant to ensure no names are used, and the ten volunteers will be recruited by the researcher by opening each envelope, starting at number 001, until ten volunteers have been found who meet the inclusion criteria for the cognitive test and represent all the academic ranks as follows: two professors, two associative professors, two assistant professors, two lecturers, and two demonstrators.

13. The researcher will ensure that only the consent sheets will link the names of the participants to the study codes. The consent forms and hard copies of the questionnaires will be kept in a separate and safe place in a locked filing cabinet in a locked room at KSU.

14. The researcher will contact the ten volunteers to arrange a time and place to conduct the one-to-one interviews with each participant, based on their free time.

15. During each interview, the study's aims and objectives, as well as the instructions and all information regarding the study, will be explained to the participant. Subsequently, the participant will be asked to answer the questionnaires provided; to complete questionnaires that were not applied previously in the participants' culture as part of the cognitive test interview; and will be asked to read and think aloud regarding the items included in the questionnaires.

16. Probing questions will be asked verbally by the researcher to attain clarification of any unclear questions from the volunteers.

17. All the interviews will be audio-recorded, and written notes will be taken.

During the collection stage of the cognitive testing interviews, the participants will complete three questionnaires that required testing and had not previously been applied in a Saudi setting as a part of the interview. They are:

1. Questionnaire on the Experience and Evaluation of Work (QEEW2) (van Veldoven, 2015): this questionnaire assesses workload (12 items), workaholism (6 items), work conflict (5 items),

support (15 items), pay (3 items), autonomy (4 items), commitment (6 items); and job satisfaction (1 item).

2. Trait Emotional Intelligence Questionnaire (TEIQue-SF) (Petrides, K.V., 2009). This questionnaire assesses emotional intelligence (30 items).

3. Nurse Educators' Intent to Stay in Academe Scale (ITR) (Derby-Dives, 2014): this questionnaire assesses intention to remain ITR (13 items).

Data will be collected in this phase via one-to-one interviews, which will be digitally recorded, and will be conducted using an interview protocol question appraisal system (Willis, 2005). Each participant will be asked to read aloud each item on the three questionnaires and talk through their thought processes used in completing the item; this will allow an evaluation of the cultural appropriateness of each of the three questionnaires. They will be asked to vocalise their thoughts by thinking aloud, spontaneously and freely, while responding to the questionnaire items. To minimize the influence of the researcher on the participant's opinion, the interviewer will interrupt as little as possible, except to say, "Tell me what you're thinking" when the participant pauses (Cosenza & Fowler, 2000).

Probing questions may be used if a participant is unsure, or if the interviewer would like more detailed information. These probes may be adopted over the course of the interview. The commonly used questions for the basic categories of cognitive probes are: a. Comprehension/Interpretation probe, e.g. ''What does the term mean to you?''; b. Paraphrasing, e.g. ''Can you repeat the question in your own words?''; c. Confidence judgment, e.g. ''How sure are you about that?'; d. Recall probe, e.g. "How do you remember that?"; e. Specific probe, e.g. "Why do you say that you think this issue is important?"; and f. General probes, e.g. "How did you arrive at that answer?" (DeMaio & Rothgeb, 1996).

5.2.1 Analysis Plan: Cognitive Testing

The researcher will listen to each digital audio recording and use a standardized question appraisal system (QAS) (see Appendix 8) to code and document the participants' responses (Willis, 2005). QAS was developed to guide researchers through a standardised appraisal of questionnaire items and to help to determine any potential problems in clarity or structure of the

items that might contribute to difficulties in questionnaire understanding (Willis & Lessler, 1999). A matrix of participant responses will be created linking questionnaire items and the code numbers derived for each participant. The matrix will represent the questionnaire items in table form. The participants will be represented in columns (vertical axis) and the items will be represented in rows (horizontal axis). Each problem identified by any participant will be entered in the appropriate cell. The matrix approach will be summarized and linked to the coded participants, relating problem to each item.

This analytic approach for the cognitive testing process will be based on the following problems: how the participant conceptualised the questionnaire items; sensitivity to answering items (e.g. payment and spiritual activities); and response category difficulties (match between respondent's written and non-verbal responses, contradiction of answers) (Willis et al., 2005). The QAS coding form (see Appendix8) for probed interviews (Willis, 2005) will be used to analyse the process. In particular, the QAS will help to identify potential problems that led to difficulties in the questionnaire's completion, as well as the structure and clarity of items from the questionnaire (Willis & Lessler, 1999). The findings will be summarised through a question-by-question analysis of the results from all the questionnaires obtained. Finally, the coded summaries using the developed matrix will help to gain an understanding of the concepts related to the study problem within the Saudi Arabian context, and thus, this will assist in decision-making, based on the feedback from the participants in regard to sensitive, ambiguousness and unnecessary items used.

5.3 Recruitment Strategy and Data Collection for Pilot Testing

A similar process of asking the recruited champions to assist the researcher in identifying the potential participants and distributing the forms that are used in cognitive testing will be taken forward. The workable recruitment strategy, therefore, will inform the strategy adopted in the next stage.

1. The two champions from both the female and the male sites will assist the researcher in estimating the number of potential participants in order to prepare the number of packs, distribute the questionnaire packs, and return the packs to the researcher, as well as following up the data collection methods.

2. Questionnaire packs will be prepared by the researcher according to the number of participants.

3. After receiving them from the researcher, the champion will deliver the packs to the offices of the eligible faculty members' offices, one-by-one in a sealed pack. Local practices of secure mail delivery will be identified and followed.

4. Each pack consists of questionnaires and participation information sheets (see Appendix 19) that explain the aims of the study, all the information regarding the study, and instructions on the method of returning the questionnaire packs. The length of time required to return the completed questionnaires will be mentioned in participation information sheet (i.e. a range of between one to two weeks).

5. The researcher will provide one sealed box in the available central place at the college (i.e. the main staff room) to return the packs.

6. Participants will return their packs following completion of the questionnaires, and they will place them again in the sealed packs, which they will subsequently place in the sealed box that is located in the staff room, in order to ensure anonymity.

7. Completion and return of the questionnaires implicitly mean that participants who were approved to be part of the study would not require written consent.

8. The researcher will meet the champions within their settings at Al-Ghad College, in order to receive the completed packs.

9. The researcher will use the pilot data to develop the analytical plan and develop the SPSS syntax.

Data collection was conducted using the proposed tools that covered all the independent and dependent variables. The questionnaires to be completed by the participants are:

5.3.1 Job Demands

Questionnaire on the Experience and Evaluation of Work (QEEW2)(van Veldoven, 2015); this questionnaire assesses the job demands by using the following subscales: workload subscales

(mental load 4 items, emotional load 5 items, physical effort 3 items), workaholism (Pace amount work 6 items), and role conflict (5 items). This scale is based on a 4-point Likert scale (1 = never, 4 = always) and by a 5-point Likert scale (from strongly disagree to strongly agree). Cronbach's alpha for this scale was .82. Correspondingly, construct validity was assured through confirmatory factor analysis (CFA). Higher scores in all the subscales of QEEW2 mean poorer outcomes.

5.3.2 Job Resources

Questionnaire on the Experience and Evaluation of Work (QEEW2) (van Veldoven, 2015); this questionnaire assesses the job resources by using the following subscales: support (career development and support: 3 items, relation with superior: 6 items, relation with colleagues: 6 items), as job autonomy (4 items), and pay (remuneration 3 items).

5.3.3 Personal Resources

1- The Trait Emotional Intelligence Questionnaire (TEIQue-SF) (Petrides, 2009); this questionnaire assesses emotional intelligence (30 items). The TEIQue-SF focuses on 15 facets: adaptability, assertiveness, emotion perception (self and others), emotional expression, emotional management (others), emotional regulation, impulsiveness, relationships, self-esteem, self-motivation, social awareness, stress management, trait empathy, trait happiness and trait optimism. The overall EI score is obtained by combining the scores of all 15 facets, which are organised within four categories: well-being (happiness, optimism, self-esteem, self-motivation), self-control (emotional regulation, impulsiveness, stress management) emotionality (empathy, emotion perception, emotional expression, relationship), and sociability (emotional management, assertiveness, social awareness, adaptability). TEIQue-SF is a 7-point Likert scale that ranges from 1-7, where 1= strongly disagree, and 7 = strongly agree. The TEIQue-SF has a high test-retest reliability of r = .78 (Petrides, 2008); construct validity was assured through confirmatory factor analysis (CFA). High scores of the global score indicate high emotional intelligence, while low scores tend to indicate low emotional intelligence (Petrides 2001).

2- Generalised Self Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995). This questionnaire assesses self-efficacy on a four-point scale from (1) 'not at all true' to (4) 'completely true'. It

has good reliability with Cronbach's alphas between .76 and .90**.** The construct validity was demonstrated by confirmatory factor analysis. High scores reveal high self-efficacy (Schwarzer, 2014).

5.3.4 Stress Outcomes

1- The Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986; Seisdedosn, 1997). This questionnaire assesses burnout, via 16 questions on an eight-point scale from ‘never’ (0) to ‘every day’ (7). MBI consists of three subscales - emotional exhaustion (EX), cynicism (CY) and professional efficacy (PE). EX (5 items) measures feelings of being emotionally overextended and exhausted at one's work; CY (5 items) measures an indifference or a distant attitude towards one's work; and PE (6 items) measures feelings of competence and successful achievement in one's work. Reliability was demonstrated with Cronbach’s alpha at 0.90, with construct validity that was demonstrated through exploratory factor analysis. High numeric scores on the EX and CY scales, and low numeric scores on the PE scales are signs of greater burnout.

2- The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Stewart-Brown et al., 2009) questionnaire assesses mental health aspects. The WEMWBS comprises 14 items with 5 response categories, from ‘None of the time’ to ‘All of the time’. It has good content validity; Cronbach's alpha was 0.89. High scores indicate high levels of well-being in the workplace.

3- The Job Descriptive Index (JDI) (Balzer et al., 2009) scale. The JDI consists of six facets, including satisfaction with: co-workers, the work itself, pay, opportunities for promotion, supervision and the job in general (JIG). Each JDI facet scale contains either 9 or 18 adjectives, or short adjectival phrase instruments, that have a brief response format (yes, no, or ?). It has good reliability ranging from .86 to .92. Construct validity was assured through confirmatory factor analysis. High scores reveal a high job satisfaction in the employees.

5.3.5 Work Engagement/Commitment

1- Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006). This questionnaire assesses work engagement (9 items) on a seven-point scale ranging from 0 (‘never’) to 6 (‘always’) and includes vigour (3 items), dedication (3 items), and absorption (3 items). Vigour refers to high

levels of energy and mental resilience while working. Dedication refers to being involved in one's work, finding meaning in one's work, being challenged, and experiencing a sense of enthusiasm, inspiration and pride. Absorption refers to being fully concentrated and engrossed in one's work, where time passes quickly, and one has difficulties detaching oneself from work. Reliability was high at α= 88–.95. Construct validity was assured through confirmatory factor analysis. High scores on the three subscales indicate having strong engagement in the work, and low scores refer to a lower level of work engagement. Meanwhile, commitment was measured using 6 items from the Questionnaire on the Experience and Evaluation of Work (QEEW2) (van Veldoven, 2015).

5.3.6 Organisational Outcome

1- Nurse Educators' Intent to Stay in Academe Scale (ITR) (Derby-Dives, 2014): this questionnaire assesses the intention to remain (ITR) (13 items) on a 4-point Likert scale format. The scale ranges from a score of 1 (strongly disagree) to 4 (strongly agree). Reliability was demonstrated with a Cronbach's alpha of .89; while validity was demonstrated through face and content validity. The total maximum score for the questionnaire is 52, indicating strongly agree (high intent to stay). The minimum score is 13, indicating strongly disagree (low intent to stay) (Derby, 2014). In addition, the socio-demographic characteristics will be assessed (e.g. age, gender, marital status, department, academic rank, and duration of experience).

5.3.7 Plan of Analysis for Pilot Testing

The raw data will be entered into SPSS version 24. Data entry will be cleaned by re-entering approximately 20% of entries randomly to check for any data entry errors. Data will be screened using descriptive statistics to also identify any mis-entered scores or presence of outliers. Data will be viewed to explore linearity by observing histograms, Q-Q Plots, scatter-plots, and normality of distribution through the skewness and kurtosis values, and the Shapiro-Wilks test (Dancy et al., 2012).

Additionally, patterns and numbers of missing items will be identified and managed prior to the scoring calculation. Missing items will be treated to maximise the number of and therefore representative of participants, and prevent invalid conclusions (Kang, 2013). Dealing with missing

items will be considered according to the instructions for each questionnaire. There are two questionnaires that have clear instructions: QEEW2.0 and JDI. Maslow's Burnout Inventory, TEIque-SF, UWES, GSE, and WEMWBS do not have instructions on how to deal with missing data, and these will be managed by using individual mean substitution. If there are > 10%, missing then the case will not be included in further analyses (Kang, 2013). Subsequently, all questionnaires will be scored following the scoring instructions for each one.

Descriptive analyses of means, standard deviations, and the range of scores will be reported. To test normality of distribution, this will be assessed using the Shapiro-Wilk test which is recommended for a sample size of less than 50 participants (Field, 2009), at alpha =0.001. The reliability of scales and subscales will be tested by using Cronbach's alpha, with acceptable levels at (>0.7) (Reynaldo & Santos, 1999). Meanwhile, for inferential analysis, the Pearson correlation coefficient (r) analyses will be used if data is normally distributed in order to indicate the association between independent variables and dependent variables, as well as the significance between variables. Meanwhile, the parametric test (t-test) will be used to compare between two groups to compare the demographic data (age, sex, and the experience) with the other variables.

5.4 Results

Ethical approval was obtained from the Ethical Committee (UREC) at UOD and subsequently (IRB) from KSU. Official permission was obtained from both the Dean of Al-Ghad International Nursing College's male section and the Vice Dean of the College from the female section.

5.4.1 Results of a) Cognitive Testing

5.4.1.1 Participants and Recruitments Strategies of Cognitive Testing

Twenty potential participants were approached from the female site and they received information sheets and consent forms that were distributed by the champion. These were delivered to their offices in a closed pack. Forty-eight hours after distribution, the researcher met the champion in her office at Al-Ghad College and received 12 completed, sealed envelopes that included their signed consents.

Twelve (60%) agreed to take part, and the researcher contacted the first 10 who met the inclusion criteria. The two who were not included were demonstrators. The 10 interviews were conducted within three days from 1 April to 3 April, holding 3 to 4 interviews per day according to the suitable times for each participant. The duration of the interviews ranged between 15 to 38 minutes, the average being 21 minutes. All the interviews were conducted in a closed, private office that was provided by the Vice Dean.

Table 5.1: Participant Numbers and Ranks: Cognitive Testing

Participant's Rank	Number of Participants	Gender	Setting
Associate professor	3	Female	Female college of ALGhad international
Assistant professor	3	Female	Female college of ALGhad international
Lecturer	2	Female	Female college of ALGhad international
Demonstrator	2	Female	Female college of ALGhad international

During each interview, the study's aims and objectives as well as the instructions and all information regarding the study, were explained to each participant.

5.4.1.2 Data Collection of the Cognitive Testing

Data was collected via one-to-one interviews and recorded using a digital recorder (Sony-ICD-UX560F). The technique of 'thinking aloud' was utilized as the main technique. Each participant was asked to think aloud regarding each item of the 3 questionnaires and talk through the thought processes they used when completing the item. They were asked to vocalise their thoughts by thinking aloud, while responding to the questionnaire items. The researcher used verbal probing as a helpful and second technique to seeking out detailed information, as presented in Appendices 9, 10 and 11.

5.4.1.3 Data Analysis of the Cognitive Testing

As a first step in the data analysis, the recordings were listened to and each of the questions in the questionnaires (QEEW-2, TEIQue-SF, ITR) were addressed using the QAS form as represented in Appendices 9, 10 and 11 (Willis, 2005). A matrix was developed for each questionnaire. The matrix tables linked all the 10 coded participants to each item to identify any specific problem in understanding the items, as presented in in following section.

I. (QEEW-2)

The 10 participants reported no difficulties in understanding the instructions on how to respond to the questionnaire and reported no fatigue during the process. The researcher used probing questions to ask the participants to repeat the instructions from their own understanding to assess their comprehension. The participants reported no problems in understanding thirty-nine items of the QEEW2, while 13 items raised some problems. Table 5.2 provides a summary of the problematic items and Appendix 9 presents the complete results. Seven participants had difficulties in understanding the meaning of some complicated terms. Two participants (002, 003) found some problems with ambiguity and with clarity in Item A-2 *(Can you decide how your work is executed on your own?).* Participant (002) had a problem in understanding, and participant (003) stated that it was ambiguous; the researcher used the probing question to seek clarification, and then the participant explained the answers similarly. Two participants expressed a lack of clarity of meaning with items B-4 *(Do you find that you are behind in your work activities?)* And B-5 *(Do you have problems with work pace?)*

In Item B-4, participant (006) asked about the meaning of ‘behind’, so the probing question was used by the researcher: “What do you think the meaning is, from your understanding?” The participant explained ‘behind’ as ‘late’ and then answered. In Item B-5, participant (003) was unclear about the meaning of ‘pace’, so the probing question was used to check the participant understands; she was then able to answer. Only one participant (001) found Item C-2 vague (*Are you confronted with things that affect you personally in your work?),* who thought about it and was able to answer. The issue of lack of clarity about the meaning of the term ‘precise’ in Item D-1 was reported by three participants (001, 005, 008), and therefore the researcher used the probing question: “What do you think the meaning is, from your understanding?” Participant 001 explained it as ‘precision to do work’; the other two participants gave examples and explanations and were then able to answer.

The problems of difficulty in understanding the meaning due to language appeared clearly in Item E-2 about the term ‘strenuous’; participant (008) explained it as ‘under physical tension’, while participant (009) explained it as ‘stress’, but both of them were able to answer. An issue of confusion and mismatching was reported only in Item E-3 by participant (009), who mismatched this item and the previous one when asked about the strength. Issues relating to clarity were presented again for five items (Items F-4, G-6, H-3, K-3, K-5). Participant (002) stated that she did not understand this question (Item-4), so the probe question was used by the researcher. After that, she could explain the meaning and answered**.** Item G-6 was unclear to participant (004), who asked about the meaning of ‘unpleasant’. The researcher used the probing question “What do you think this means?” She explained, and then answered the question. Participant (006) asked about the meaning of ‘well’, in item H-3, and then thought about it, understood, and said ’agreed’ and was able to answer. Participant (002) had a problem understanding the term ‘very at home’ in Item K-3. The probing question was used by the researcher to seek clarification, and the participant said, “very what?” She thought that there was some wording missing. A problem of clarity about the term ’obliged by’ was reported by two participants (008, 010) in Item K-5, both asking about the meaning, so the researcher used the probing question “What do think about the meaning?” Participant (008) explained it as “I am not sorry to go”, while participant (010) asked whether it was ‘accept or refuse,’ stating that if the meaning was ‘refuse’, her answer would be ‘agree’.

For the remaining items of QEEW-2, the participants were able to answer without any problems or difficulties. Some participants thought before giving their answers, but they were able

to give clear answers. The specific identified problems of the QEEW-2 cognitive testing interviews are provided in Table 5.2.

Table 5.2: Identified Problems Related to the Specific Item of (QEEW-2)

Items	Questions	Summary of Problems that were Reported by Participants	Number of Participants
Item A-2	Can you decide how your work is executed on your own?	Clarity: unclear, complex and vague.	2 (002, 006)
Item B-4	Do you find that you are behind in your work activities?	Clarity: contains complicated syntax, undefined and unclear.	1 (006)
Item B-5	Do you have problems with the work pace?	Clarity: contains undefined and unclear term.	1 (002)
Item C-2	Are you confronted with things that affect you personally in your work?	Clarity: unclear and vague.	1 (001)
Item D-1	Do you have to work with a lot of precision?	Clarity: contains complicated syntax, undefined and unclear term.	3 (001, 005, 008)
Item E-2	Do you find your work physically strenuous?	Clarity: contains undefined and unclear term.	2 (008, 009)
Item E-3	Does your work require physical strength?	Mismatch between questions.	1 (009)
Item F-4	Do you have to do work which you would rather not do?	Clarity: contains complicated syntax, undefined and unclear term.	1 (002)
Item G-6	Have there been any unpleasant occurrences between you and your superior?	Clarity: contains undefined and unclear term.	1 (004)
Item J-3	I am paid enough for the work I do.	Clarity: contains complicated syntax.	1 (003)
Item H-3	Do you get on well with your colleagues?	Clarity: contains undefined and unclear term.	1 (006)
Item K-3	I feel very at home working for this organization.	Clarity: vague, there are multiple ways to interpret the question.	1 (002)
Item K-5	With respect to this organization, I really feel obliged to stay on several more years.	Clarity: contains complicated syntax, undefined and unclear term.	2 (008, 010)

II. TEIQue-SF

Using the TEIQue-SF, 8 items were identified as being problematic, while the other 18 items did not present any problems. Five of the ten participants had some problems in understanding some items; there is also the matrix summary of the findings of the TEIQue-SF cognitive testing interviews with the participants. Table 5.3 provides a summary of the problematic items and Appendix 10 presents the complete results.

The participants reported no difficulties in understanding the instructions on how to respond to the questionnaire and reported no fatigue during answering the questions; the researcher used probing questions to ask the participants to repeat the instructions from their understanding to assess their understanding of each questionnaire instruction. The main problem related to the TEIQue-SF was mismatch between the response categories. Some participants were confused and mismatched between number 1 as 'completely disagree' and 7 as 'completely agree'. This mismatch was reported by four participants (participants 001, 002, 003 and 004) in relation to Item 4, Item 5, Item 7, Item 10 and Item 28.

The second issue was a problem in clarity which was reported by two participants (003, 008) in relation to 3 items of the questionnaires. Item 11 was reported being unclear and vague in understanding the term 'influence'. Participant (003) asked whether the influence was positive or negative; the probing question was then used by the researcher to ask about the participant's thinking, who had two answers to whether it was perceived as negative or positive.

Item 12 had a problem in the clarity of the meaning of the term 'gloomy'. Two participants reported a problem in understanding this term. Participant (003) stated that it was unclear, but participant (008) asked whether the meaning of 'gloomy' was positive or negative, so the researcher used the probing question to ask about her understanding of the meaning, which was subsequently explained as 'good'. Participant 003 had a problem understanding the meaning of the term 'pause' in item 23. She thought about it and then explained 'pause' as 'stop' and then was able to answer.

For the remaining items of TEIQue-SF, the participants were able to answer without any problems or difficulties. Some participants thought before giving answers, but they were then able

to give clear answers. The specifically identified problems were identified and are presented in Table 5.3.

Table 5.3: Identified Problems Related to the Specific Items of (TEIQue-SF)

Items	Questions	Summary of Problems Reported by Participants	Number of Participants
Item 4	I usually find it difficult to regulate my emotions.	Mismatch between question and response categories	1 (002)
Item 5	I generally don't find life enjoyable.	Mismatch between question and response categories	1 (003)
Item 7	I tend to change my mind frequently.	Mismatch between question and response categories	1 (001)
Item 10	I often find it difficult to stand up for my rights.	Mismatch between question and response categories	1 (001)
Item 11	I'm usually able to influence the way other people feel.	Clarity: unclear, complex and double barrelled (contains more than one implicit question).	1 (003)
Item 12	On the whole, I have a gloomy perspective on most things.	Clarity: contains undefined and unclear term. Double barrelled (contains more than one implicit question)	2 (003, 008)
Item 23	I often pause and think about my feelings.	Clarity: undefined and unclear term.	1 (003)
Item 28	I find it difficult to bond well, even with those close to me.	Mismatch between question and response categories.	1 (004)

III. Intention to Remain Questionnaire (ITR)

The Intention to Remain Scale (ITR) has 13 items to assess the nursing faculty's intent to remain in academia (Derby-Dives, 2014). The matrix summary of the findings of the ITR cognitive testing interviews with the participants is presented in Appendix 11. The participants reported no difficulties in understanding the instructions on how to respond to each item of the questionnaire and reported no fatigue during answering the questions; the researcher used probing questions to ask the participants to repeat the instructions to assess their understanding of each questionnaire instruction. During some items, participants (001, 002, 004 and 010) thought before giving their answers but they were able to give clear answers and some of them explained their answers without reporting any difficulties in understanding or lack of clarity of the item.

5.4.2 Results of Pilot Testing

5.4.2.1 Participants of Pilot Testing

Forty-six participants were approached to participate in the pilot study from both female and male sites (22 males and 24 females). Thirty-nine participants agreed to complete the questionnaires and did so between 7 April and 18 April 2019. The response rate was 84.78%, as shown in Figure 5.1. At the female site, the response rate was 83.33% (24 were approached, 21 questionnaires were completed and returned, while one of them returned the questionnaires empty). At the male site, the response rate was 86.36% (22 approached, 19 completed and returned questionnaires). The participants took from 30 to 60 minutes to complete the questionnaires.

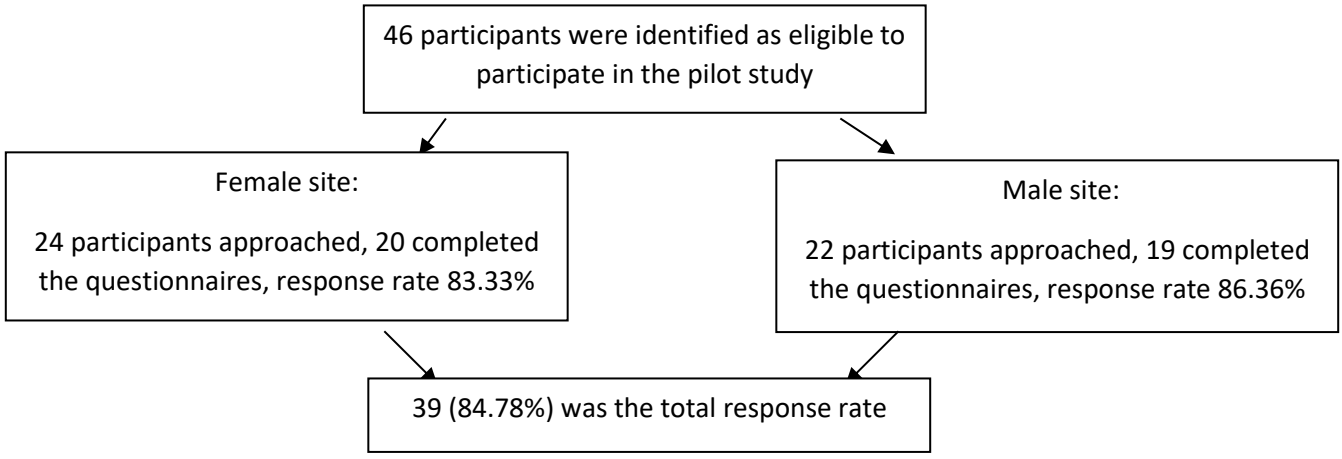


Figure 5.1: Participants' Response Rates

5.4.2.2 Completion Characteristics

The completion rate for the study questionnaires ranged between 92.31 and 95.13%, as Table 5.4 shows. The MBI, WEMWBS, GSF and ITR had the highest completion rate, while the TEIQue-SF had the lowest completion rate. This high completion rate suggests that the questionnaires were acceptable to the participants.

Table 5.4: Completion Rates

Questionnaire	Number of Items	Expected total of N of Items x 39 Participants	Number of Missing Items	Percentage of Missing Items %	Questionnaire Completion Rate %
QEEW2	52	2028	130	6.41	93.59
TEIQue-SF	30	1170	90	7.69	92.31
MBI	16	624	31	4.97	95.03
UWES	9	351	26	7.40	92.6
WEMWBS	14	546	27	4.95	95.05
JDI	90	3510	183	5.21	94.79
GSF	10	390	19	4.87	95.13
ITR	13	507	25	4.93	95.07

5.4.2.3 Statistical Results of Pilot Testing

The data from the 39 participants were entered into the SPSS version 24 for the eight questionnaires. The 39 sheets of data were entered one by one after being coded by the given numbers, from 001 to 039. To avoid any problems during data entry, this was checked by re-entering the 10 sheets; no errors were detected. Data were screened, explored, and the distribution examined through observing outliers and linearity, histogram, Q-Q Plots, scatter-plots, the skewness, kurtosis, and Shapiro-Wilks test. All continuous results demonstrated acceptable values without reporting any errors or outlier results.

The missing items were identified and calculated; the number of missing items per questionnaire was: 78 items in QEEW2; 35 items in TEIQue-SF; 12 items in GSE; 18 items in MBI; 19 items in WEMWBS; 18 items in UWES; 15 items in ITR. The missing data were managed following the instructions for the two questionnaires - QEEW2 and JDI. For the other questionnaires, MBI and TEIQue-SF, UWES, GSE, WEMWBS and ITR, were managed by using individual mean substitution (Kang, 2013). Missing item numbers in each questionnaire for the participants and how they were managed in detail can be found in Appendix 12.

The eight questionnaires (QEEW2, TEIQue-SF, WEWMBS, MBI, UWSU, GSE, JDI and ITR) were scored and calculated following the scoring system instructions. Three questionnaires

(QEEW2, TEIQue, JDI) that had negative items were reversed as per their instructions and then scored.

5.4.2.4 Sample Characteristics

The sample characteristics are summarised in Table 5.5 below. The three largest groups of faculty members were between the ages of 30-40 years (n=16, 41%), 40-50 years (n=10, 25.6%), and 50-60 years (n=6, 15.4%). There were an almost equal number of males (n=19, 47.5%) and females (n=20, 51.2%) in the sample. Meanwhile, a vast majority of the people were married (n=29, 76.3%). The three major departments represented were: medical-surgical (n=11, 29.7%), administration and education (n=8, 21.6%) and community and mental health (n=5, 13.5%). The three major academic ranks represented in the sample were: assistant professors (n=15, 38.5%), lecturers (n=12, 30.8%), and demonstrators (n=6, 15.4%). The three major groups that were represented in terms of work experience were: people with more than 15 years of experience (n=10, 25.6%), people with between 5-10 years of experience (n=9, 23.1%) and people with between 2-5 years of experience (n=8, 20.5%).

Table 5.5: Participants' Demographic and Professional Characteristics

Characteristics	Frequency (%)
Age:	
25-30	5 (12.8)
<30-40	16 (41)
<40-50	10 (25.6)
<50-60	6 (15.4)
<60-70	2 (5.1)
Gender:	
Male	19 (48.7)
Female	20 (51.3)
Marital status:	
Married	29 (76.3)
Single	6 (15.8)
Divorced	1 (2.6)
Widowed	2 (5.3)
Department:	
Medical-surgical	11 (29.7)
Maternity and Child Health	2 (5.4)
Administration and Education	8 (21.6)
Community and Mental Health	5 (13.5)

Characteristics	Frequency (%)
Others	11 (29.7)
Academic rank:	
Professor	1 (2.6)
Associate Professor	5 (12.8)
Assistant Professor	15 (38.5)
Lecturer	12 (30.8)
Demonstrator	6 (15.4)
Experience:	
Two years or less	5 (12.8)
2-5 years	8 (20.5)
5-10 years	9 (23.1)
10-15 years	7 (17.9)
More than 15 years	10 (25.6)

5.4.2.5 Descriptive Statistics of Questionnaire Data

Descriptive statistics present the mean, standard deviation, and range of scores of the used scales and subscales (see Table 5.6).

Table 5.6: Summary Statistics for Scale/Subscale Scores

Scales	N	Mean	Std. Deviation	Maximum	Minimum
QEEW2 - Job autonomy	39	28.062	18.826	66.67	0
QEEW2 - Pace and amount of work	39	48.319	2.801	100	11.11
QEEW2 - Emotional workload	39	41.403	23.724	100	0
QEEW2 - Mental workload	38	75.292	22.795	100	33.33
QEEW2 - Physical effort	37	33.633	25.221	100	0
QEEW2 - Role conflicts	38	31.184	2.791	80	0
QEEW2 - Relationship with supervisor	38	32.310	18.756	61.11	0
QEEW2 - Relationships with colleagues	38	31.914	16.964	61.11	0
QEEW2 - Career development and support	38	39.254	25.624	100	0
QEEW2 – Remuneration	38	44.078	23.642	100	0

QEEW2 - Organisational commitment	38	42.148	2.718	100	0
QEEW2 - Working in this organisation	38	39.474	26.401	100	0
TEI - Total Score	37	137.884	23.480	184	117
TEI - Mean Score	37	4.596	.783	6.13	3.9
TEI - Well-being	37	5.069	.850	5.83	2.67
TEI - Self-control	37	4.658	.923	6.33	3.83
TEI – Emotionality	37	4.149	.966	6.5	3.13
TEI – Sociability	37	4.618	.921	6.33	3.67
GSE - Mean Score	38	32.977	4.225	4	2.5
GSE - Total Score	38	3.298	.423	40	17
MBI – EX	38	2.842	1.480	5.5	0
MBI – CY	38	2.729	1.273	5	.6
MBI – PE	38	4.687	1.117	6	1.83
WEMWBS - Total Score	38	57.368	8.132	70	41
UWES – VI	37	13.784	3.224	18	6
UWES – DE	37	14.324	4.164	18	3
UWES – AB	37	14.405	3.379	18	6
ITR - Total Score	38	38.406	7.161	52	24
JDI - People Score	38	38.763	15.117	54	4
JDI - Job Score	38	42.132	12.876	54	6
JDI - Work Score	38	36.395	12.824	54	6
JDI - Pay Score	38	27.474	14.269	54	6
JDI - Promotion Score	38	21.474	15.378	54	0
JDI - Supervision Score	38	36.947	14.829	54	6

The results of the Shapiro-Wilk test of normality indicated that most of the scale/subscale scores were normally distributed at alpha=.001. A number of subscales were not normally

distributed i.e. QEEW2 (Mental workload; Working in this organisation); UWES – Dedication; JDI (People Score; Job Score; Work Score; and Supervision Score) (see Appendix 14).

The reliability of scales and subscales, as measured by Cronbach's alpha, demonstrated that most were within acceptable levels (i.e. >0.7) (Reynaldo & Santos, 1999). When looking at the whole 8 questionnaires, all the Cronbach alpha statistics were acceptable and ranged between 0.804 and 0.963. However, in some of the subscales the reliability was not within the acceptable range as follows: in the QEEW2, job autonomy (.646), relationship with supervisors (.697), and relationship with colleagues (.628). The Cronbach's alpha of subscales of TEIQue-SF ranged between .306 and .644 and only one subscale (vigour) of UWES was .498. The Cronbach alpha result for the scales and subscales are reported in Appendix 15(a-b), with the key finding that the TEIQue-SF and UWES performed poorly.

5.4.3 Inferential Statistical Analyses for the Study to Address the Pilot Research Questions PQ3 (a-b-c-d)

The JD-R model guided the correlational analyses and the associations between job demands (workload, workaholism, role conflict) with stress outcomes (burnout, mental wellbeing and job satisfaction) in the negative pathway; and guided the association between the job resources (autonomy, support, pay) and personal resources (EI, self-efficacy) with work engagement in the positive pathway. Subsequently this guides the association between the stress outcomes and the engagement with the main organisation outcomes (ITR).

For PQ3-a: How well does the Job-Demand-Resources model apply/work, answer these questions: a. which job demands (workload, workaholism, role conflict); job resources (autonomy, support, pay); or personal resources (EI, self-efficacy) are associated with stress outcomes (burnout, mental wellbeing, job satisfaction) and engagement?

Three correlation tests using the Pearson test (for normally distributed data), as presented in Tables 5.7, 5.8 and 5.9 were performed to address this question.

Table 5.7: Correlation between Job Demands and Stress Outcomes (MBI, JDI, WEMWBS) (as negative arm of JD-R model)

Job demands (Higher score = worse work condition)	MBI – EX	MBI – CY	MBI – PE	WEMWBS	JDI - People Score	JDI - Job Score	JDI - Work Score	JDI - Pay	JDI – Promotion	JDI - Supervision
QEEW2 - Pace and amount of work	.427**	.191	-.201	-.118	.083	-.060	-.224	-.261	-.095	-.118
QEEW2 - Emotional workload	.371*	.113	.100	-.142	.079	-.050	-.022	-.144	-.121	-.270
QEEW2 - Mental workload	.184	.001	.218	.069	-.109	-.117	-.046	-.151	.162	-.257
QEEW2 - Physical effort	.444**	.050	.145	.026	.125	-.066	-.091	-.344*	-.076	-.203
QEEW2 - Role conflicts	.496**	.449**	-.071	-.138	-.239	-.358*	-.488**	-.473**	-.500**	-.432**

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

An increase in pace and amount of work, emotional load and physical effort, and increased role conflict is associated with greater emotional exhaustion. In addition, increased role conflict is also associated with high cynicism and a reduction in all elements of job satisfaction, while an increase in a physical effort is associated with a reduction in job satisfaction (pay).

Table 5.8: Correlation between Job Resources and Engagement (As a positive arm of JD-R model)

Job resources (Higher score=worse work condition)	UWES-VI	UWES-DE	UWES-AB
QEEW2 - Job autonomy	-.312	-.345*	-.062
QEEW2 - Relationship with supervisor	-.469**	-.421*	-.135
QEEW2 - Relationships with colleagues	-.495**	-.231	-.377*
QEEW2 - Career development and support	-.430**	-.561**	-.296
QEEW2 - Remuneration (pay)	.031	-.204	-.272

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

A better relationship with the supervisor, better relationships with colleagues, and high career development and support are associated with high work engagement, i.e. vigour; while increased job autonomy, a better relationship with the supervisor, high career development and support are associated with high work engagement (dedication). Only better relationships with colleagues are associated with a high engagement in work (absorption). There is no significant association between pay and work engagement.

Table 5.9: Correlation between Personal Resources and Engagement (as a positive arm of JD-R model)

Personal resources (Higher score = more resources)	UWES-VI	UWES-DE	UWE-SAB
TEI - Well-being	.510**	.282	.005
TEI - Self-control	.474**	.268	.082
TEI – Emotionality	.277	.240	.283
TEI – Sociability	.392*	.379*	.012
GSE	.307	.199	.098

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

High level of emotional intelligence (TEI-wellbeing, TEI- self-control, TEI-sociability) is associated with high work engagement (Vigour). In addition, high emotional intelligence (TEI-sociability) is associated with a high level of work engagement (Dedication).

For Pq3-b. Which stress outcomes (burnout, mental well-being, job satisfaction) are associated with intention to remain?

To address this question, the correlation test was conducted between stress outcomes and ITR, as a secondary test of the negative arm of JD-R model, as shown in Table 5.10.

Table 5.10: Correlation between Stress Outcomes (MBI, WEMWBS, JDI) and ITR (as negative arm of JD-R model)

Stress Outcomes	ITR
MBI – EX	-.279
MBI – CY	-.002
MBI – PE	.119
WEMWBS	.467**
JDI - People Score	.321*
JDI - Job Score	.145
JDI - Work Score	.363*
JDI - Pay Score	.324*
JDI - Promotion Score	.171
JDI - Supervision Score	.006

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

The results demonstrate that an increase in mental wellbeing (WEMWBS), and in job satisfaction (JDI-people, JDI-work, JDI-pay) are associated with high intention to remain ITR.

For PQ3-c. Is work engagement associated with intention to remain?

To address this question, a correlation test was performed between work engagement and ITR, as presented in Table 5.11.

Table 5.11: Correlation between Engagement and ITR (as a positive arm of JD-R model)

Work engagement Higher scores=more engagement	ITR
UWES-VI	.444**
UWES-DE	.461**
UWES-AB	.349*

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

An increase in work engagement (Vigour, Dedication, Absorption) is associated with a high intention to remain.

For PQ3:d- Are there differences in stress outcomes, work engagement and intention to remain between:

1. Men and women;

2. Younger and older faculty members;

3. Faculty members who have less and long experience years in this area of work.

To address this question, parametric tests (t-test) were performed to explore the differences between demographic data: gender (between females and males); age (between more than 40 years old and less than 40 years old; and experience (between less than 10 years and more than 10 years working) with the stress outcomes, engagement and ITR. Age and experience were dichotomised at 40 and 10 by using the median of these two variables (age, experience) to divide them into two equal categories between the two groups.

The results indicate no significant gender differences in relation to stress outcomes (MBI, WEMWBS, JDI), work engagement and ITR. There were significant differences in age with regards to MBI-Pe, JDI-pay, JDI-supervision and engagement UWES-Dedication. There were also significant differences between the people who have experience of less than 10 years and those of more than 10 years with regards to JDI-pay, JDI-promotion and engagement UWES-Dedication.

Table 5.12: T-test- Differences between Males and Females in: Stress Outcomes, Engagement and ITR

Tools	Experience Categorised	N	Mean	Std. Deviation	Sig.	T	Sig. (2-tailed)
WEMWBS	Male	18	55.2222	8.24304			
	Female	20	59.2990	7.72552	.840	-1.574	.124
MBI-EX	Male	18	2.3917	1.32889		-1.568	.126
	Female	20	3.2475	1.52242	.263		
MBI-CY	Male	18	2.4444	1.29352		-1.850	.073
	Female	20	2.9850	1.22947	.515		
MBI-PE	Male	18	4.3533	.99665		-1.317	.196
	Female	20	4.9880	1.15727	.514		
JDI –People	Male	18	38.8889	17.25889		-1.816	.078
	Female	20	38.7500	13.36482	.390		
JDI-Job	Male	18	43.8333	12.07452		.747	.978
	Female	20	40.7000	13.61539	.655		
JDI-Work	Male	18	36.6111	15.01426		.062	.457
	Female	20	36.3500	10.81556	.513		
JDI –Pay	Male	18	30.2222	13.06795		1.107	.952
	Female	20	25.1000	15.22429	.303		
	Male	18	17.5556	13.66069			.272

JDI - PROMOTION	Female	20	25.0000	16.30628	.154	-1.516	
JDI - SUPERVISION	Male	18	41.2778	11.27624		1.509	.135
	Female	19	34.3158	16.20032	.074		
UWES-VI	Male	18	13.1111	3.75561		-1.245	.137
	Female	19	14.4211	2.56722	.141		
UWES-DE	Male	18	13.7778	4.82098		-.773	.228
	Female	19	14.8421	3.48430	.204		
UWES-AB	Male	18	14.6111	3.88267		.356	.449
	Female	19	14.2105	2.91698	.115		
ITR	Male	18	38.4672	6.67964		.353	.726
	Female	20	38.3500	7.74104	.689		

The mean of stress outcomes, engagement and ITR was not significantly different in regard to the gender.

Table 5.13: T-test Difference between Age (less than 40 years old and above 40 years old) in (Stress Outcomes, Engagement and ITR)

Tools	Experience Categorised	N	Mean	Std. Deviation (S.D)	Sig.	t	Sig. (2-tailed)
WEMWBS	Less than 40	20	56.0490	8.88704			
	More than 40	18	58.8333	7.16404	.394	-1.056	.298
MBI-EX	Less than 40	20	3.2875	1.51222		-1.068	.293
	More than 40	18	2.3472	1.30997	.168		
MBI-CY	Less than 40	20	3.1550	1.22011		2.053	.047
	More than 40	18	2.2556	1.18779	.995		
MBI-PE	Less than 40	20	4.7875	1.06244		2.301	.027*
	More than 40	18	4.5761	1.19504	.724		
JDI –People	Less than 40	20	35.5500	13.59363		.574	.570
	More than 40	18	42.4444	16.26336	.539		
JDI –Job	Less than 40	20	40.1500	13.49181		-1.409	.168
	More than 40	18	44.4444	12.03046	.712		
JDI –Work	Less than 40	20	32.6000	14.28065		-1.037	.307
	More than 40	18	40.7778	9.53973	.067		
JDI –Pay	Less than 40	20	23.5000	12.91062		-2.094	.044*
	More than 40	18	32.0000	14.76084	.463		
	Less than 40	20	16.8000	14.19266		-1.880	.069

JDI - Promotion	More than 40	18	26.6667	15.33930	.585		
JDI - Supervision	Less than 40	19	38.4737	13.45927		-2.051	.048*
	More than 40	18	36.8889	15.43445	.464		
UWES-VI	Less than 40	19	13.6316	3.68496		.332	.742
	More than 40	18	13.9444	2.75408	.080		
UWES-DE	Less than 40	19	12.9474	5.13673		-2.171	.037*
	More than 40	18	15.7778	2.10198	.000		
UWES-AB	Less than 40	19	13.4211	4.10035		-1.884	.068
	More than 40	18	15.4444	2.03563	.002		
ITR	Less than 40	20	37.1705	7.64222		-1.916	.066
	More than 40	18	39.7778	6.52196	.552		

**Significant at the 0.01 level (2-tailed)

*Significant at the 0.05 level (2-tailed)

People who are less than 40 years old show greater burnout (MBI-PE) and are more satisfied with their supervision than people who are older than 40. People more than 40 years old were found to be more satisfied with their pay and more engaged and had more dedication to their work.

Table 5.14: T-test Differences between Experiences (less than 10 years working and more than 10 years in: Stress Outcomes, Engagement and ITR)

Tools	Experience Categorized	N	Mean	S. D	Sig.	t	Sig. (2-tailed)
WEMWBS	Less than 10 years	21	56.7219	8.59884			
	More than 10 years	17	58.1659	7.69807	.896	-.539	.593
MBI-EX	Less than 10 years	21	3.1119	1.43805		-.546	.589
	More than 10 years	17	2.5088	1.50460	.899		
MBI-CY	Less than 10 years	21	2.9571	1.17487		1.253	.219
	More than 10 years	17	2.4471	1.36662	.259		
MBI-PE	Less than 10 years	21	4.7895	1.04352		1.217	.232
	More than 10 years	17	4.5612	1.22167	.551		
JDI –People	Less than 10 years	21	36.0000	14.43607		.611	.546
	More than 10 years	17	42.2941	15.64754	.918		
JDI –Job	Less than 10 years	21	39.2381	14.41147		-1.276	.211
	More than 10 years	17	45.8235	9.78670	.096		
JDI –Work	Less than 10 years	21	32.3810	13.95520		-1.671	.104
	More than 10 years	17	41.5294	9.26767	.053		
JDI –Pay	Less than 10 years	21	22.5714	13.32881		-2.417	.021*
	More than 10 years	17	33.6471	13.34607	.843		
JDI – Promotion	Less than 10 years	21	17.4286	14.24279		-2.545	.016*

	More than 10 years	17	26.4706	15.66093	.494		
JDI - Supervision	Less than 10 years	20	37.4500	14.36910		-1.842	.074
	More than 10 years	17	38.0000	14.59452	.939		
UWES-VI	Less than 10 years	21	13.7143	3.55166		-.115	.909
	More than 10 years	16	13.8750	2.84898	.204		
UWES-DE	Less than 10 years	21	13.0952	4.91838		-2.159	.038*
	More than 10 years	16	15.9375	2.11246	.001		
UWES-AB	Less than 10 years	21	13.7143	3.95149		-2.376	.157
	More than 10 years	16	15.3125	2.24258	.017		
ITR	Less than 10 years	21	36.6862	7.43028		-1.554	.130
	More than 10 years	17	40.5294	6.39451	.558		

**Significant at the 0.01 level (2-tailed)

*Significant at the 0.05 level (2-tailed)

People who have more than 10 years' experience in work are more satisfied with their pay and promotion and seem to be more engaged and dedicated to their work than those who have less than 10 years' experience.

5.5 Discussion

The aim of this pilot study was to test the recruitment strategy and the proposed questionnaires among the Saudi nursing faculties through two elements: A- Cognitive Testing and B- Pilot Testing. Separately, the recruitment strategy using champions worked well, as evidenced by obtaining a good response rate. There were 12 volunteers who agreed to participate out of the 20 participants who were approached for this cognitive testing. Ten volunteers were recruited from all the available academic ranks. This is sufficient to reflect the total population's feedback and

range of experience about understanding the items of questionnaires as well as ensuring representation, and thereby helping to reduce sample bias (Willis, 2005)

Having the champions to assist the researcher allowed smooth distribution of information packs for the cognitive testing and survey; this might have had an effect on the success of the recruitment of the participants. The participants felt comfortable and confident when using the sealed box to return the signed consent forms and envelopes, showing that this method was suitable and workable to protect their privacy and the confidentiality of the participants' information. By including the range of grades and academic ranks in the study sample, there was no apparent selection bias, although that might have occurred (Taylor & Herr, 2003). Additionally, it was more suitable for the conduction of the cognitive interviews to select female participants, as in Saudi culture it is not permitted for a female to interview a male. Thus, only female participants could be recruited. Results from the cognitive testing may therefore reflect a gender bias (Wang et al., 2008).

The interviewing techniques of thinking aloud and using probing questions were found to be helpful for the researcher. These techniques demonstrated how the participants understood the concepts through vocalising their thoughts freely and clearly without any influence from the researcher and freedom from interviewer-imposed bias (DeMaio & Rothgeb, 1996). The main limitation to using the 'thinking aloud' technique was that the researcher needed to allow some time to prepare and explain what was required to each participant before conducting the interview and ensure that the participant understood.

The concurrent probing method was utilised, with the probing questions being presented immediately after the administration of each item, in order to maximise the participants' recollection of their thoughts at the time (Willis, 2005). The main challenge that was faced here was how to use a probing question without any bias or control in the interview discussion (McColl, 2001). To avoid this, the researcher had a good background in the types of probing questions and in which situations to use them, and only used them when needed. These two techniques seemed to be workable and ideal for the researcher, as they were helpful at interpreting the participants' understanding of the questionnaire items and sought more clarification from a participant regarding an unclear response (Willis, 2005).

The problems which arose from the analyses that tested the participants' understanding of the three questionnaire items can be summarized into three points: clarity, mismatch in the response categories, and understanding the meaning of some terms (as presented in Tables 5.2 and 5.3). The issue appeared in 13 items of QEEW2 and around 8 items in TEIque-SF questionnaire. Regarding the clarity problems, some of the items contained unclear terms or undefined syntax (e.g. gloomy, precious, strenuousness) which affected the response or answer which in turn might influence the accuracy of the result. The lack of clarity might refer to the fact that all the participants were using English as their second language and might have struggled to understand the complicated terms, plus culturally meanings can be different, and therefore some of the survey questions appeared to be not applicable to all languages and cultures (Kudela et al., 2004).

The occurrence of mismatch is notable for different reasons. The formulation of the questions and response categories may play a role (especially with a Likert-type scale ranging from completely disagree to completely agree) could have contributed to the mismatched answers. The mismatches might be due to the added burden of responding with the extra pressure of comprehension and struggling in mapping between question and response options. There were lengthy or multi response options around 7 or more that might confuse the participants. Mismatches might happen when the participant takes longer to answer the unclear and complicated questions because of the longer, and time-consuming, which might place a burden on cognitive processing to select the applicable choice (Smyth et al, 2006).

For surprising findings, in items that were expected to be sensitive, such as pay and relationship with supervisors, the participants generally reported that these questions were acceptable and had no hesitation in answering. Since most participants were non-Saudi, it may be that payment was perceived as good for them in the Saudi universities compared to their countries. Another explanation may be that pay and supervision issues might be perceived differently across different cultures (Alshammari, 2015). The findings from cognitive testing the whole questionnaires reflected that they were well accepted and understood, even though there were issues of clarity, and mismatch in some items of QEEW2.0; most problems arose in the TEIQue-SF that assessed emotional intelligence. The final result of the pilot study depends on the integrated results of both elements (a- the cognitive and b- pilot testing). Therefore, the second element (b-

pilot testing) of the pilot study was conducted after the cognitive analysis to test the applicability of the study questionnaires within a Saudi context. The research questions were addressed.

The recruitment strategies and using the champions seemed to be workable as evidenced by the high response rate. Senior staff members were found to be supportive, and the champions were cooperative and keen to be involved at both sites. This perhaps reflects the interest and importance of the study. Further, recruiting champions for both sites to assist the researcher worked well. The female champion was nominated by the Dean, while the male champion was a volunteer, who asked to be champion when he knew the aim of the study, as he was very keen to facilitate the recruitment of participants. Because the Dean nominated the female champion, there might have been a risk of bias, but this is difficult to determine. Both approaches to recruit the male and female champions were effective (Taylor & Herr, 2003). Both champions reported that the faculty members were very interested in participating in the study; and they did not report any difficulties in the distribution of the packs. All the participants used the box to return the completed questionnaires that showed that the box method appeared to be workable and provided confidentiality. Recruitment using champions was also found to be successful in a recent Saudi study in Dammam University (Bakr et al, 2019).

The questionnaires overall were well accepted, with one main exception. The completion rate of the study questionnaires by the participants was high, ranging between 92.31 to 95.13%. There was a small proportion of random, missing values (<7.7%). Overall, the rate of missing items for all the questionnaires was acceptable, but the highest percentage of missing data were 7.69, as shown in TEIQue-SF. The high response and completion rate with low missing items suggested a preliminary acceptance and applicability of the questionnaires in a Saudi setting (Sivo et al., 2006). The completion time of between 20 to 60 minutes suggests that the questionnaires appeared to be understood and acceptable by participants. All the Cronbach's alphas for the 8 scales were greater than 0.7, as an acceptable value (Reynaldo & Santos, 1999). However, there were 3 subscales of the TEIQue-SF that had a low Cronbach's alpha at TEIQue-SF self-control (α .279), TEIQue-SF-Emotionality (α .433), and TEIQue-SF-Sociability (α .306), and one subscale of UWES-Vigour was low also at (α.498). The low Cronbach alpha of the three subscales of TEIQue-SF as well as one subscale of UWES may indicate that these two questionnaires are

not reliable in a Saudi context, which suggests it should be replaced by a reliable questionnaire for a Saudi setting.

The JD-R model guided the relationships between the variables of the study very well in structured directions and a clear pathway. This model categorises the relationship between the variables into two arms, negative and positive. For the negative arm in this study, it found that an increase in some variables of job demand (pace and amount of work, emotional load and physical effort, and increased role conflict) is associated with of some stress outcomes (greater exhaustion, cynicism) and a reduction of some elements of satisfaction. While for the positive arm, this study found that an increase of all variables in both job resources (autonomy, relationships with the supervisor and colleagues, career development and support) and personal resources (EI) are associated with an increase in work engagement, with the exception of one variable of job resources (pay) as there were no significant associations between pay and work engagement.

Supporting literature was sourced to assess the relationship between JDs and stress outcomes, and between resources and engagement. The first is a study conducted in the health care sector in the USA which reported the experience of low burnout and high work engagement, which may be explained by the combination of having low demands and high job resources. Having high and good support as job resources may buffer the bad sequences of burnout, and increase work engagement (Bakker & Demerouti, 2014). The second study, by Van den Broeck (2010), found that health care professionals experienced a high workload, which was viewed as a particularly challenging job demand but when combined with having a high level of personal resources, work engagement increased (Bakker & Demerouti, 2014; Parker, 2014). In addition, employees themselves may improve their jobs by decreasing job demands and increasing personal resources to improve and increase their well-being and work engagement (Van den Heuvel et al., 2015). Additionally, Green and Tsitsianis (2005) found that work intensity and load as a job demand has a strong negative and significant impact upon job dissatisfaction. This finding supports the pilot test's findings of the negative correlation between job demand and job satisfaction. Moreover, there was one study that highlighted the importance of personal resources by using personal skills that correlated positively to an increase in work engagement. The study explained that employees appear to benefit more from having personal resources, such as EI, to be more engaged in their work rather than concentrating only on job resources over their work (Van den Broeck et al., 2008).

There was no association between pay (JR) and work engagement as an unexpected result. A similar result supported this finding, that pay was not an important variable in improving engagement in work (Alshammari, 2015). Pay issues might be perceived differently across different cultures or might be perceived for non-Saudi employees in Saudi setting as adequate and not an essential resource to increase their engagement (Alshammari, 2015). The unexpected result from the current pilot study suggested there is a need for more explanation and investigation into the main study, where a large sample of participants may reflect a more accurate result.

The result found that when people have good mental wellbeing (WEMWBS) and seem satisfied with most aspects of their work (JDI-people, JDI-work, and JDI-pay), it contributes to increasing their intention to remain in their work. This is a consistent finding across a range of international studies (KuDo et al., 2006; Van der Vaart et al., 2013; Chumg et al., 2015). These studies found that both variables of wellbeing and feeling satisfied by work could improve the intention to remain in work and decreeing the turnover intention across all the types of organisations.

The results reflected that there was a significant association between high work engagement (UWES-Vigor, Dedication, Absorption) and high ITR. The contribution of the present pilot study is in providing support for the applicability of the findings of Alfes et al. (2013), which shows the significant and positive relationship between high work engagement and the high level of ITR. Most employees who reported a greater feeling of engagement in their work were more likely to stay in their job.

There was no statistically significant difference in stress outcomes between men and women. This is in contrast with another study in the literature that was conducted in the Middle East (Iran) with a similar culture to the pilot study. It was found that even though the mean stress outcomes in women was more than in men, this could be due to physiological differences between women and men, as well as social status, domestic duties and mothering responsibilities, besides their work as employees (Madadzadeh et al., 2018). Additionally, it might be that resulted from the sample size of the pilot study being too small to detect the difference.

Younger people who are less than 40 years old have greater burnout and are more satisfied with their supervision than older people (older than 40 years). Possible reasons for younger

employees' higher burnout levels may include a lack of skills to deal with everyday problems and a lack of coping skills (Ahola et al., 2006; Duchscher, 2009; Ghorpade et al., 2007; Patrick & Lavery, 2007). Comparatively, older people (more than 40 years old) are more satisfied with their pay and are more engaged in their work (UWES-DE) than younger people who are less than 40 years old. Older workers seem to be more likely to have higher levels of engagement than younger or middle-aged employees and have higher interpersonal skills, as well as an understanding of how to use and manage their job resources, such as their pay. Older people focus on a reduced number of important life domains such as money and rewards and seek to get deeper meanin and, satisfaction, enjoying being fully engaged and intimate at work (James et al., 2011; Pitt-Catsouphes & Matz-Costa, 2008).

People who have more than 10 years' experience in their work are more satisfied with their pay (JDI-pay) and promotion (JDI-promotion) and are also more engaged in their work (UWES-DE) than those who have less than 10 years' experience. This finding was similar to that in a study by Madadzadeh et al. (2018), which shows that the mean stress outcome levels in people with experience over 10 years was less, and thus, more significant than for others who were less experienced. People who have more years of experience at work seem to have acquired more skills to cope with all the situations that reflect higher levels of satisfaction and engagement in their work, in comparison to other employees with less experience.

5.6 Conclusion

The pilot study was conducted through two elements: a- cognitive testing, and b- pilot testing. The recruitment strategies using the champions in both elements of the pilot study worked well and will be replicated in the main study. All the pilot research questions, including the cognitive and pilot testing questions, were addressed during this study. The data collection of cognitive testing utilised two workable and useful techniques: thinking aloud and the probing technique and worked well.

The response rate and completion rates were high and thus indicated the applicability and acceptance of the questionnaires by the participants. The questionnaires appeared to be well accepted and understood, albeit some issues emerged. Two questionnaires performed less well than the others, the TEIQue-SF and UWES, and their use in the main cross-sectional study needs

to be reconsidered. Another EI will be identified and a longer version of the UWES which has better psychometric properties will be used.

The Job Demand Resource (JD-R) model (Bakker & Demerit, 2007) appears to be an applicable conceptual model to guide the relationships between variables and will be used in the main cross-sectional study. It allows the main variables associated with intention to remain to be assessed, predictors identified, and relationships tested.

Chapter Six – Phase 3: Quantitative Cross-Sectional Study

6.1 Introduction and Background

This chapter presents Phase 3 of the cross-sectional study. Results from the pilot study demonstrated that the proposed participant recruitment process worked well and should be replicated in Phase 3. The tested questionnaires were shown to be applicable and reliable in a Saudi context, except the TEIQue-SF scale. It was, therefore, decided that a different scale should be used to measure emotional intelligence within the main empirical study. The Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte et al., 1998) scale was identified as a suitable alternative and because it had previously been utilised within a Saudi context, no pilot testing was undertaken (Abou Hashish & Bajbeir, 2018). The questionnaire has good psychometric adequacy demonstrated by both the original developer (Schutte et al. 1998) and within the Saudi context (Abou Hashish and Bajbeir, 2018). Schutte et al. (1998) found the internal consistency as measured by Cronbach's alpha, was 0.90, and a two-week test-retest reliability of .78 for total scale scores. Construct validity was demonstrated by confirmatory factor analysis. This scale was based on a strong theoretical framework from one of the first pioneers of EI, Salovey and Mayer' model (ability-based model). The scale was identified from the scoping reviews as a common scale used in different cultures and languages. This scale met the criteria for selecting the tools for this study.

In addition, pilot testing suggested that using the longer version of the UWES scale (UWES-17) to measure work engagement would be more appropriate in order to have more reliable subscales (Tabachinick & Fidell, 2013). The JD-R model is also appropriate to underpin the main empirical study as a useful approach.

A mixed methods study was identified as the most appropriate approach to the main study, consisting of a quantitative and qualitative study. In this chapter only the cross-sectional survey has been presented. The quantitative cross-sectional survey was conducted to test the variables that emerged from the systematic review and how these variables explain ITR within a Saudi context (Phase 3). This quantitative phase will address research questions (RQs) 1 to 4 (see below).

The research questions that will address the identified gap in knowledge and understanding are:

RQ1: To what extent do the demographic characteristics of nursing faculties influence stress outcomes (burnout, mental wellbeing, and job satisfaction), work engagement and intention to remain?

RQ2: How are western conceptualisations job demands, job resources and personal resources understood in nursing faculties in HEs within Saudi Arabia?

RQ3: Which personal characteristics, job demands, job resources and personal resources predict or are associated with: a- stress outcomes (burnout, mental wellbeing, and job satisfaction) (the negative arm of the JDR model), and b- work engagement and commitment (the positive arm of the JDR model)?

RQ4: Which stress outcomes (burnout, mental wellbeing, job satisfaction) and work engagement/work commitment are predictors or are associated with organisational outcomes of Intention to Remain (ITR) in nursing faculties within this setting?

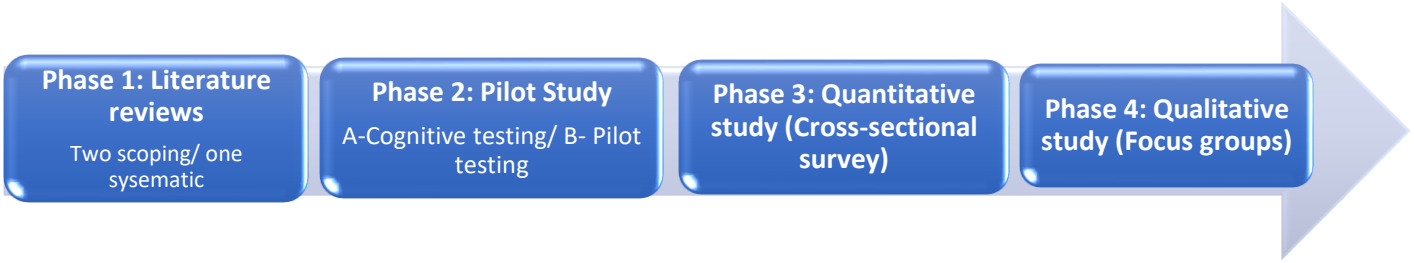


Figure 6.1: The Four Phases of the Full Study

6.1.1 Ethical Considerations

The cross-sectional survey will conduct research with consideration to the ethical implications through the study process. Institutional report approval and the universities' ethics review boards from both Universities' (UOD) and subsequently from (KSU) scientific research committees will be obtained prior to data collection. Completion and return of the questionnaires

imply that the participants have consented to be part of the study; further written consent will not be sought. The data of participants will be protected in accordance with the UK and KSA Data Protection Act Regulations (Alhadeff & Dumortier, 2012).

6.1.2 Methodological Approach

This section describes: the study design, settings, participants; eligibility criteria; recruitment of the faculty; data collection; and the proposed analytic plan.

6.1.3 Design of Cross-Sectional Survey

This phase will use a quantitative cross-sectional design. The purpose of this survey to: a) test whether the variables that emerged from the systematic review are applicable and appropriate within a Saudi context; b) to explore relationships between independent and dependent variables; and c) to test the applicability of JD-R model in Saudi setting. This phase will address RQs 1, 2, 3 and 4.

A range of questionnaires will be used to measure the identified independent variables: JD (workload, workaholism, role conflict), JR (support, autonomy, pay) and PR (Emotional Intelligence (EI), self-efficacy), and the dependent variables: stress outcomes (burnout, mental wellbeing, job satisfaction), work engagement, commitment and intention to remain ITR. The design will test both the positive pathway (work engagement, commitment) and negative pathway (burnout, wellbeing, and job satisfaction) of the Job Demand-Resources Model, as well as assess levels of, the association between, and the predictive value of the identified independent on dependent variables. It will also test the relationship between the negative and positive outcomes on the organisational outcome of intention to remain. The participants will be faculty members from five governmental Colleges of Nursing in the Kingdom of Saudi Arabia (KSA).

Additionally, testing of the JDR model will be explicitly considered in order to identify how job demands, job and personal resources might be understood by nursing faculties in HE within the KSA and will identify which factors predict or are associated with stress outcomes and work engagement and commitment. These will then be tested further to explore the relationship between stress outcomes and work engagement, and commitment and intention to remain (ITR) in a Saudi academic setting.

6.1.4 Setting of Cross-Sectional Survey

The setting of the sample in this phase will include the main five governmental nursing colleges in Saudi Arabia, as these types of colleges have established academic systems and have different categories or ranks of faculty. These nursing colleges will include King Saud University (KSU), Imam Abdulrahman University (IAU), University of Hail (UOH), King Abdul-Aziz University (KAU), and Princess Nora University (PNU). These two last universities are only for female students.

6.1.4.1 Participants included in Cross-Sectional Survey

The study aims to recruit academic nursing faculty members who are affiliated to the proposed governmental colleges in the KSA (KSU, PNU, KAU, UOH, IAU) and who agree to participate. The proposed number of faculty members will potentially be between 200 and 400, depending on the response rate.

Inclusion Criteria: The participants will be nursing faculties members who: are able to read and write English; have teaching loads; have academic rankings (from demonstrator to full professor); hold a BSN, MSN and or PhD Degree in Nursing Education; and have spent at least 2 years in academia.

Exclusion Criteria: Participants are non-nursing faculties; those who are unable to understand the English language, who are not academic and do not possess any academic rank; those who do not have a certificate in nursing; and those who have less than 2 years' experience in academia.

6.1.4.2 Recruitment Strategies of Cross-Sectional Survey

The following steps will be conducted for the cross-sectional survey:

1. Ethical approval will be obtained from the Ethical Committee (UREC) at UOD (see Appendix 21) and subsequently (IRB) from KSU (see Appendix 22); an authorisation letter from the committees will be issued to permit the researcher to access the main study's setting and participants. This ethical approval will be sought for both phases simultaneously.

2. Each Dean of the five nursing colleges will be contacted and informed of the process by sending an official letter that consists of the aim and information regarding the study. Permission will be sought to conduct the study in their setting.

3. The researcher will recruit one faculty member in each institution, including the female and male sites, to be a ‘champion’ in each site; an individual who is interested in being responsible for the distribution of the questionnaire packs.

4. The number of participants will be identified by the champion from the head of academic affairs at each Nursing College, i.e. those who meet the inclusion criteria of the study without the researcher’s knowledge of the names of participants in order to maintain anonymity.

5. The champion will provide the researcher with the estimated number of participants who meet the eligibility criteria to be potential participants, in order to prepare the number of participant information sheets (see Appendix 23) and questionnaires (see Appendix 24).

6. The champions will distribute the packs after receiving them from the researcher to the eligible faculty members' offices one-by-one in a closed pack. Local practices of secure mail delivery will be identified and followed.

7. The researcher will provide one sealed box in the available central place of each college (the main staff room) for participants to return completed questionnaires. In this way anonymity is ensured.

8. Completion and return of the questionnaires implicitly means that participants agree to be part of the study and therefore written consent is not required.

9. The researcher will meet with each champion within their setting after two to three weeks in order to receive the completed packs.

6.2 Data Collection of the Cross-Sectional Survey

Data collection will be conducted by using a self-administered questionnaire that covers all the independent variables and dependent variables. These tools were tested in the pilot phase and have acceptable psychometric adequacy and have either been used or tested in the pilot study for acceptance with the cultural context of the Saudi target population. In addition to a section for

socio-demographic characteristics (e.g. age, gender, nationality, marital status, department, academic rank, qualification, years of experience in academia and experience in current institution), it will include eight scales to measure the different main variables of the study. These comprise the Questionnaire on the Experience and Evaluation of Work (QEEW2) to assess work, wellbeing and performance; the Schutte Self-Report Emotional Intelligence Test (SSEIT) to assess how the individuals use and manage their emotions and manage others' emotions; the Generalised Self-Efficacy Scale (GSE) to assess self-efficacy; the Maslach Burnout Inventory (MBI) to assess burnout using its three subscales; the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) to assess subjective wellbeing and psychological functioning; the JDI Job Descriptive Index and JIG and Job in General to measure job satisfaction; the Utrecht Work Engagement Scale (UWES) to assess work engagement; and the Nurse Educators' Intent to Stay in Academe Scale to assess intention to remain (ITR).

The questionnaires will measure all the concepts of JDR model (Bakker & Demerouti, 2007) as the diagram shows (see Figure 6.2).

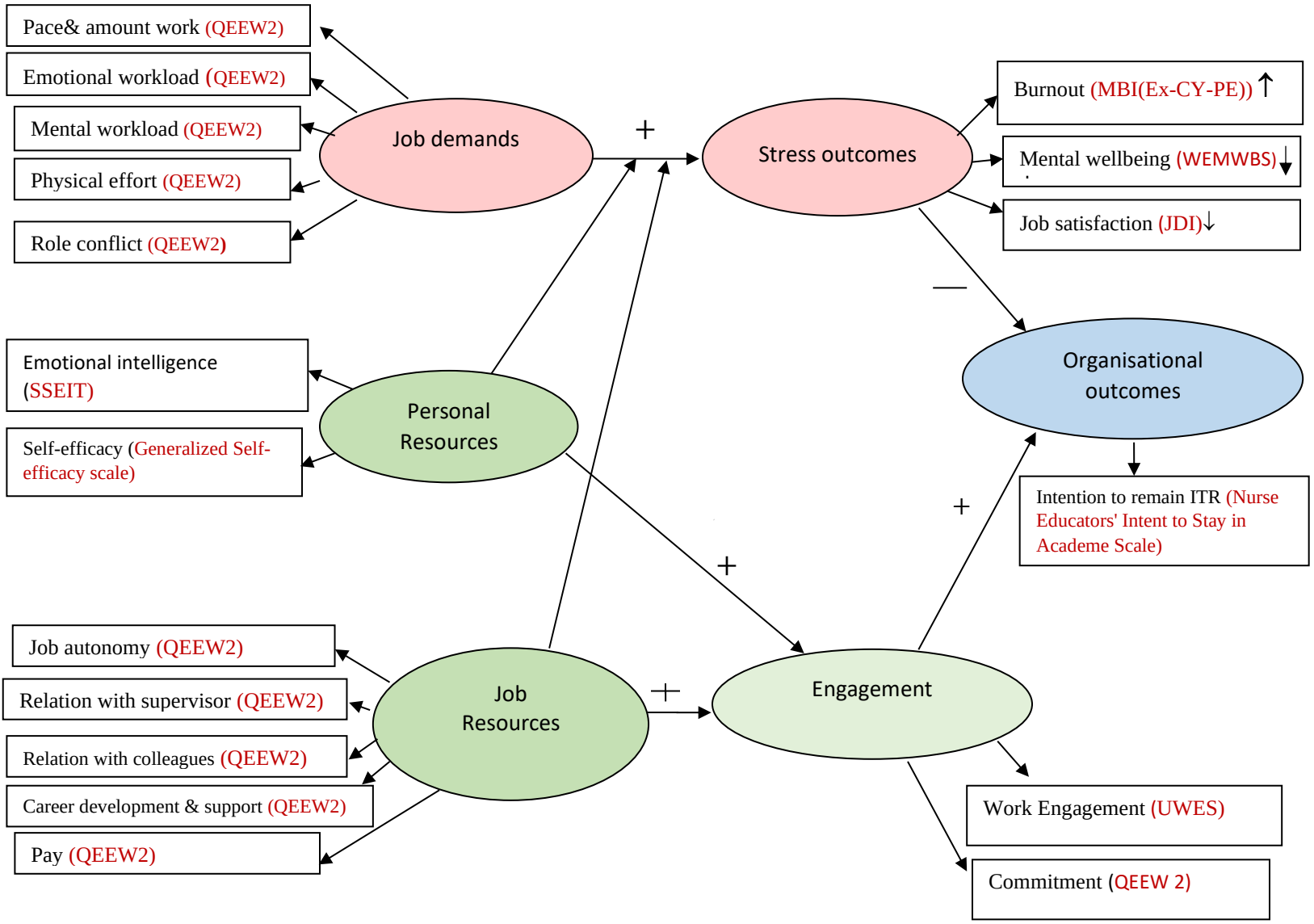


Figure 6.2: JD-R model (Bakker & Demerouti, 2011)

6.2.1 The Questionnaires that will be Utilised

In this Phase, the same questionnaires of the pilot study (see Chapter Five) are used, with exception of two of them: EI and the work engagement tools. All these questionnaires were presented in detail in the previous chapter but will be briefly mentioned here with the description of the cut scores.

1- The Questionnaire on the Experience and Evaluation of Work (QEEW2.0) (van Veldoven, 2015):

Twelve subscales of QEEW2.0 scale were used in this study (52 items) to assess employee experiences and evaluate work characteristics. Job demands were operationalised as pace and amount of work (workaholism) (6 items), workload (mental load 4 items, emotional load 5 items, physical effort 3 items), and role conflict (5 items). Job resources were operationalised as support (career development and support: 3 items, relation with superior: 6 items, relation with colleagues: 6 items), as job autonomy (4 items), and pay (remuneration 3 items). Commitment was assessed by using the involvement in organisation subscale (6 items). Only one item subscale of working in the organisation is used to assess job satisfaction. Responses are summed and standardised with all scale scores ranging from 0-100. Higher scores on the scales reflect worse work characteristics and a low score indicate positive work characteristics.

2- The Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte et al., 1998):

This scale is the alternative to the TIQues-SF that was used in the pilot phase as this one is more reliable and applicable in a Saudi setting. This is a 33-item self-report measure of emotional intelligence that assesses how individuals use and manage their emotions and manage others' emotions. Responses are measured on a five-point Likert-type scale that range from 1 to 5; (1=strongly disagree, 5=strongly agree). The measure is based on Salovey and Mayer's conceptual model of emotional intelligence and incorporates three categories (appraisal and expression of emotion: regulation of emotion and utilisation of emotion) but is reported as one overall score. It has a reliability rating of 0.90; the construct validity was demonstrated by confirmatory factor analysis (Schutte et al., 1998). Total scores can range from 33 to 165 with higher scores indicating higher emotional intelligence and a low score indicating low emotional intelligence. Three levels of 'cut-off' scores have been suggested (Abou Hashish & Bajbeir, 2018) and these are:

Level of EI	Range of scoring
Low EI	(33 to 77)
Moderate EI	(78 to 121)
High EI	(122-165)

3- The Generalised Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995):

This 10-item tool assesses self-efficacy. The total score ranges between 10 and 40, with a higher score indicating more self-efficacy and a low score indicating low self-efficacy.

4- The Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986; Seisdedosn, 1997):

This 16-item questionnaire assesses burnout using three subscales: emotional exhaustion (EX), 5 items measuring feelings of being emotionally overextended and exhausted at one's work; Cynicism (CY), 5 items measuring an indifference or a distant attitude towards one's work, and Professional Efficacy (PE), 6 items measuring feelings of competence and successful achievement in one's work. The EX and CY subscale scores range from 5 to 35, and PE subscales range from 0 to 45. The scores are summed and then presented as mean scores. Higher scores of EX and CY correspond to greater experienced burnout, and lower scores of PE correspond to greater experienced burnout. Cut-off scores are suggested by Reinardy (2013) that represent low, medium and high levels of burnout.

Level (mean)	Ex = Exhaustion (High level Ex = high burnout level)	CY = Cynicism (High level CY= high burnout level)	PE = Professional Efficacy (High level PE = low burnout level)
High	3.2 and above	2.20 and above	5 and above
Moderate	2.01-3.19	1.01-2.19	4.01-4.99
Low	2.00 and less	1 and less	4 and less
Range	0.00-07.00	0.00-07.00	0.00-07.00

5- Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) (Stewart-Brown et al., 2009):

The scale assesses subjective wellbeing and psychological functioning with a total score ranging from 14-70. High scores indicate high mental wellbeing, while low scores indicate low mental wellbeing. Three 'cut-off' scores have been suggested indicating low, moderate and high wellbeing (Taggart, 2015).

Level of wellbeing	**Range of scoring**
Low wellbeing	< 43
Moderate wellbeing	43-60
High wellbeing	> 60

6- The JDI Job Descriptive Index (Balzer et al., 2009):

Measures of job satisfaction include 6 independently scored subscales: the work itself (18 items), pay (9 items), opportunities for promotion (9 items), supervision (18 items), co-workers (18 items) and the job in general scale (JIG) (18 items), measuring overall satisfaction with the job; the range of scores is from 0 to 54 for all subscales. Lower scores indicate less satisfaction, and higher scores indicate higher satisfaction.

7- Utrecht Work Engagement Scale (UWES) (Schaufeli, Bakker & Salanova, 2006):

This scale is an alternative to the short form of UWES in the pilot; this long version of UWES is used in this phase as a more reliable scale. This 17-item questionnaire assesses work engagement as vigour (6 items), dedication (5 items) and absorption (6 items). The response format is a seven-point frequency scale ranging from never (0) to always (6). Vigour refers to a high level of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. Dedication refers to being involved in one's work, finding meaning in one's work, being challenged, and experiencing a sense of enthusiasm, inspiration and pride. Absorption refers to being fully concentrated and engrossed in one's work, whereby time passes quickly, and one has difficulties detaching oneself from work. The reliability is high with Cronbach's alpha coefficients .88 – .95. Construct validity was assured through confirmatory factor analysis. The total score for ranges are: vigour (0 to 36), dedication (0 to 30), and absorption (0 to 36). Once item scores are summed, mean values are calculated. Higher scores indicate being more engaged and involved in work, while lower scores indicate low engagement in work. The UWES scores can be classified as very low, low, average, high, and very high (Schaufeli et al., 2006).

	Vigour	**Dedication**	**Absorption**	**Total score**
Very low	≤2.17	≤1.60	≤1.60	≤1.93
Low	2.18-3.20	1.61-3.00	1.61-2.75	1.94-3.06
Average	3.21-4.80	3.01-4.90	2.76-4.40	3.07-4.66
High	4.81-5.60	4.91-5.79	4.41-5.35	4.67-5.53
Very high	≥5.61	≥5.80	≥5.36	≥5.54
Range	.00-6.00	.00-6.00	.00-6.00	.00-6.00

8- Nurse Educators' Intent to Stay in Academe Scale (ITR) (Derby-Davis, 2014):

This questionnaire assesses the intention to remain with 13 items. The total score ranges from 13 to 52. A higher score indicates high intent to stay in academia and a lower score indicates low intent to stay.

6.3 Data Analysis Plan

6.3.1 Screening and Cleaning Data

The data will be entered into SPSS version 24. Data entry will be checked by re-entering approximately 20% of randomly chosen responses, to check or detect any error entries. Data will be checked, screened and cleaned by running frequency counts and descriptive statistics to identify and correct any unusual data or errors (Schulz & Grimes 2005).

6.3.2 Identifying and Handling the Missing Data

Patterns and numbers of missing items will be identified and managed prior to scoring the questionnaires. Missed data reduce the statistical power and the representativeness of the samples (Cheema, 2014). Dealing with missing items will be handled according to missing items instructions for each questionnaire. Two questionnaires (QEEW2 and JDI) have clear instructions. For those questionnaires that do not have specific instructions on how to deal with missing data, these will be managed by looking at the pattern of the missing data. Individual cases with more than 10% missing items on any subscale/scale will be excluded from further analysis. Where an individual has equal or less than 10% of missing items on any subscale/scale, missing items will be substituted with an individual's mean score for the subscale/scale (Tabachnick & Fidell, 2014).

6.3.3 Computing Scales Scores

Following the cleaning and handling of the missing data, all the eight questionnaires will be scored and computed following the scoring instructions for each one. It should be noted that for the scales that have negative item (QEEW2, SSEIT, and JDI), the negative item will be reversed, as per instructions, prior to scoring.

6.3.4 Descriptive Analysis

Frequency counts will be computed for all categorical variables (gender, age, nationality, marital status, academic rank, department, qualifications, and years of experience in academia and in current institution). Separately, descriptive statistics will be computed for all other continuous variables of JD, JR, PR, stress outcomes, WE, commitment, and ITR. Means and standard deviations will be reported depending on whether the variables are normally or not normally distributed (Simon, 2007).

6.3.5 Checking Data Normality

Outliers will be identified by observing histograms, Q-Q Plots, and scatterplots. Normality of distribution will be tested by using the single sample Z test as a recommended test for a large sample size (Field, 2009). The Z test score will be calculated by dividing the skewness values or excess kurtosis by their standard errors. For a sample size "$50 \leq n < 300$", normality of the distribution is accepted at a Z value between +3.29 and-3.29 (Kim, 2013).

6.3.6 Internal Consistency (Reliability)

Cronbach's alpha coefficient will be used to assess internal consistency with a value greater than or equal to 0.7 considered acceptable (Vellis, 1991).

6.3.7 Inferential Analysis

Relations will be tested by using independent sample t-test or Mann-Whitney test according to normality of distributions. Correlations will be assessed using Pearson correlation for normally distributed variables or Spearman rank correlation if not. Multivariable regression approaches will be used to identify the influence of more than one independent variable on the dependent variable, to explain how well independent variables predict a specific dependent variable (Lomax, 2000).

Analyses will be addressed by answering the following research questions from 1 to 4:

RQ1: *To what extent do the demographic characteristics of nursing faculties influence the stress outcomes, work engagement and intention to remain*?

Depending on whether the variables are normally, or not normally distributed, parametric or non-parametric techniques will be utilized. These will include independent sample t-test or Mann-Whitney test (for non-normally distributed) to examine the differences of the scores of emotional outcomes, work engagement and intention to remain by gender, nationality, and categories of age, experience in academia, and experience in current institution. Pearson or Spearman rank correlation (for non-normally distributed) analyses will be used to establish any significant associations between numeric demographic characteristics (age, experience in academia and in current institutions) and emotional outcomes, work engagement, and intention to remain.

RQ2: *How are Western conceptualisations of personal resources, job demands, and job resources understood in nursing faculties in HE within Saudi Arabia?*

This question will be addressed through calculating the response and completion rate, and pattern of and number of missing items, in addition to testing the reliability of the questionnaires and the time to complete them. A high response and completion rate with low missing items, high reliability, with acceptable time to complete the questionnaires reflects that the questionnaires appear to be understood and acceptable by participants in the Saudi context.

RQ3*: Which personal characteristics, job demands, job resources and personal resources predict or are associated with a- stress outcomes (the negative arm of the JDR model); b- work engagement and commitment (the positive arm of the JDR model).*

This question will be addressed by testing both the negative and positive arms of the JDR model. Correlation analyses will identify those demographic characteristics, job demands, job resources and personal resources that are significantly associated with stress outcomes, work engagement, and commitment (Tabachnick & Fidell, 2014).

Two sets of multiple linear regressions will be developed, one with stress outcomes (burnout, wellbeing, and job satisfaction) as the dependent variables, and another with work engagement and commitment as the dependent variables as regards the negative and positive arm of the JD-R model. Only the independent variables significantly

related/correlated to the dependent variable at p=<0.15 will be included in the regression analyses.

Negative Arm

a) Regression 1: Burnout (MBI-EX) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job demands (pace, amount of work, emotional workload, mental workload, physical effort, role conflict) of QEEW2 as independent variables.

b) Regression 2: Burnout (MBI-CY) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job demands (pace, amount of work, emotional workload, mental workload, physical effort, role conflict) of QEEW2 as independent variables.

c) Regression 3: Burnout (MBI-PE) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job demands (pace, amount of work, emotional workload, mental workload, physical effort, role conflict) of QEEW2 as independent variables.

d) Regression 4: Mental wellbeing (WEMWBS) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job demands (pace, amount of work, emotional workload, mental workload, physical effort, role conflict) of QEEW2 as independent variables.

e) Regression 5: Job satisfaction (JDI) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job demands (pace, amount of work, emotional workload, mental workload, physical effort, role conflict) of QEEW2 as independent variables.

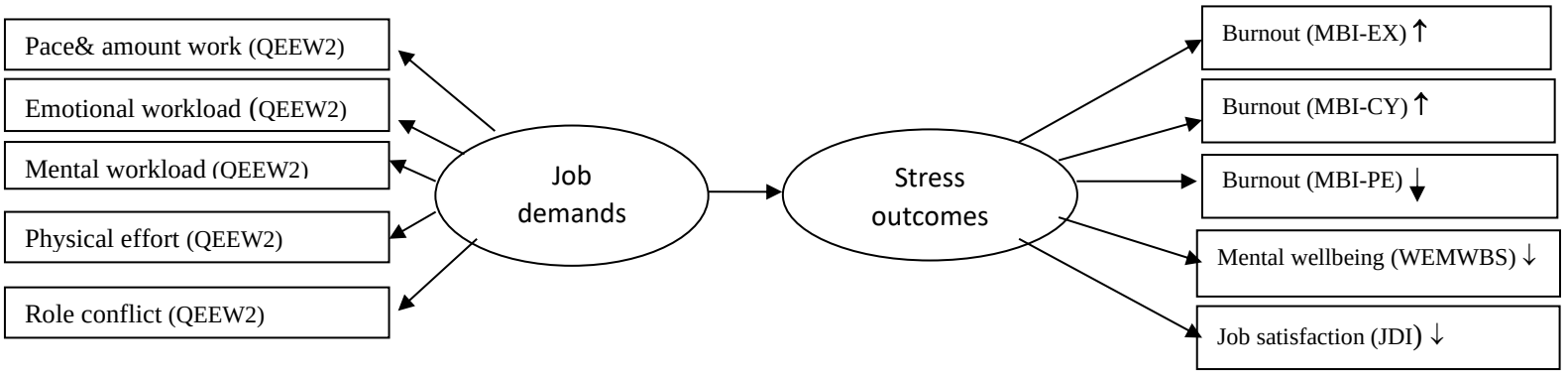


Figure 6.3: Multiple Regressions in the Negative Arm of JDR Model

Positive Arm

a) Regression 1: Work engagement (UWES) as the dependent variable and demographic and professional characteristics (age, gender, nationality, experience in academia, and experience in institution), Job resources (job autonomy, relationship with supervisors, relationship with colleagues, career development and support, pay) of QEEW2, and then personal resources (emotional intelligence [SSEIT], and self-efficacy [GSE]) as independent variables.

b) Regression 2: Commitment (QEEW2) as the dependent variable and demographic and professional characteristic (age, gender, nationality, experience in academia, and experience in institution), Job resources (job autonomy, relationship with supervisors, relationship with colleagues, career development and support, pay) of QEEW2, and then personal resources (emotional intelligence [SSEIT], and self-efficacy [GSE]) as independent variables.

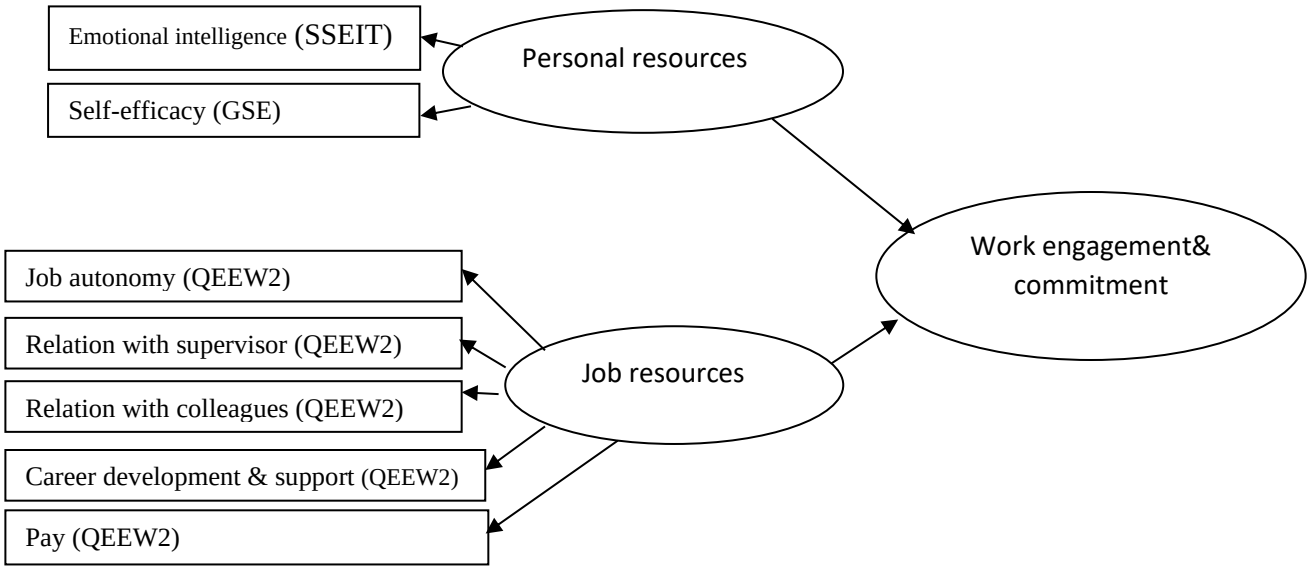


Figure 6.4: Multiple Regressions in the Positive Arm of JDR Model

In each regression, modelling, multiple regressions technique will be used as in the following steps:

First step: Sample size adequacy for conducting regression analysis will follow Tabachnik and Fidel's guidance of N > 50+8m, m=numbers of IVs or factors (Tabachnick & Fidell, 2014).

Second step: The assumptions of regression including normality, linearity, homoscedasticity, and absence of multicollinearity will be checked. Multicollinearity will be assessed through two approaches, namely correlation coefficients, and Variance Inflation Factor (VIF) values. The correlation will be examined among independent variables and should be less than .85 to meet the assumption of absence of multicollinearity (Tabachnick & Fidell, 2014). The VIF for each independent variable will be checked: if <10, it will be considered acceptable with no concern about multicollinearity (O'Brien, 2007).

Third step: Multivariable outliers will be detected by measuring the Cook's distance that should be <0.05 and Mahalanobis desistance which should be < critical chi-square (DF=number of IVs) to indicate no concern with outliers (Tabachnick & Fidell, 2001).

Fourth step: All variables will be checked for normality, linearity and homoscedasticity by visually examining the residual scatterplots. According to Tabachnick and Fidell (2007), this

assumption will be met if the scatterplot takes an "approximate" rectangular shape; scores will be concentrated in the centre (about the 0 point) and distributed in a rectangular pattern. More simply, scores will be randomly scattered about a horizontal line. In contrast, any systematic pattern or clustering of scores is considered a violation.

Fifth step: The IVs that correlate with the dependent variable at a significance level of 0.15 or less will be selected for inclusion into the multiple regression models. They will be entered in the model using a stepwise method.

Sixth step: To determine how well a regression model fits the data *R, R^2*, adjusted R^2, and the standard error of the estimate will be reported (Draper & Smith, 1998).

Seventh step: To evaluate which variables included in the model contribute to the prediction of the DVS, the unstandardised regression coefficients (*B*), the standard errors (SE *B*), the standardised regression coefficients (*ß*), the *t*-statistic, the significance of the *t*-statistic, the *R,* the *F* statistic (*F*), *R2* and the change in *R2* (Δ*R2*) will be reported. The categorical independent variables will be coded (dummy coding) to make the results interpretable. Since regression analysis requires numerical variables, inputting nominal variables without first converting them to dummy variables can and mostly does lead to misleading findings (Skrivanek, 2009).

6.3.8 Interaction Effects

First interaction: The influence of the personal resources to the job demand and job stress outcomes will be tested by the moderation, to examine whether the personal resources moderate the relationship between job demands and stress outcomes. In order to explore this buffering effect of the personal resources, multiple linear regressions (MLR) with moderation will be carried out. The moderation model tests whether the prediction of a dependent variable, Y, from an independent variable, X, differs across levels of a third variable, Z (MacKinnon & Fairchild, 2009), as showing in the following figure.

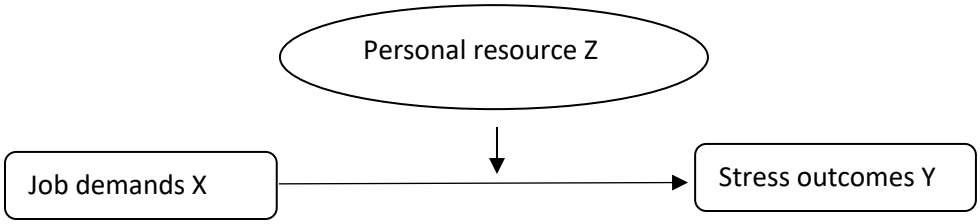


Figure 6.5: Personal Resources Moderate the Relationship between Job Demands and Stress Outcomes

Following Hayes and Matthes (2009) steps for the moderation using the MLR, the first step involves stepwise entering of job demand variables into the model. Secondly, each personal resource variable representing the potential moderator variable will be entered also using a stepwise method (i.e. SSEIT, GSE). Lastly, the interaction terms between the job demands and personal resources will be entered. After each step, the amount of additional explained variance will be assessed. *ß3* provides an estimate of the moderation effect. If *ß3* is statistically significantly different from zero, there is significant moderation of the X-Y relationship (Fairchild & MacKinnon, 2009).

Second interaction: The influence of the job resources on the relation between job demands and stress outcomes will be tested by assessing the moderation effect of job resources moderates on this relation. In order to explore this assumed buffering effect of job resources, MLR with moderation will be carried out. Then, similar steps will be followed as for previous interactions.

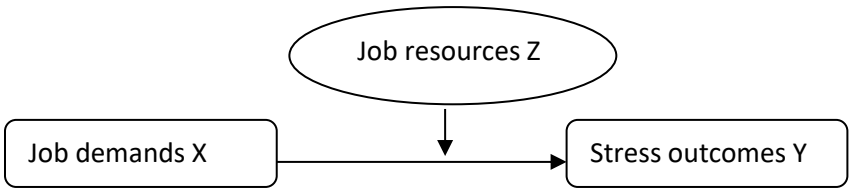


Figure 6.6: Job Resources Moderate the Relationship between Job Demands and Stress Outcomes

RQ4: *Which stress outcomes (burnout, mental wellbeing, job satisfaction and Work Engagement/Work Commitment predict or associate with organisational outcomes of Intention to Remain (ITR) in nursing faculties within this setting?*

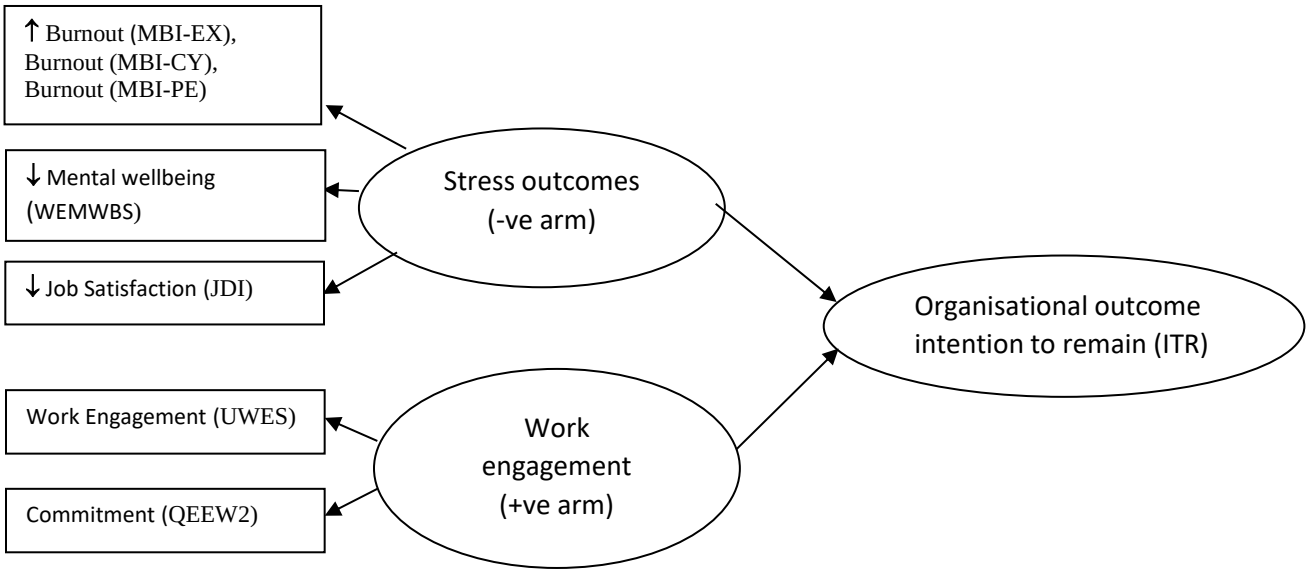


Figure 6.7: Multiple Regressions between Positive and Negative Arms with Intention to Remain of JDR Model

Pearson's or Spearman's correlation analysis will be utilised to test for the association between stress outcomes (burnout, mental wellbeing, job satisfaction), work engagement/work commitment, and ITR. Multiple linear regressions will be utilised with ITR as the DV and burnout (MBI), mental wellbeing (WEMWBS), job satisfaction (JDI), and work engagement (UWES) /work commitment (QEEW2) as the IVs to identify the significant predictors of ITR. A similar modelling approach will be followed for MLR as mentioned in the previous research question.

6.4 Results

This section includes the results of the survey recruitment, data collection, participants' return rate, setting, completion characteristics, preliminary examination of data, participants' characteristics, and the results of descriptive and inferential statistics.

6.4.1 Recruitment and Data Collection

Two ‘champions’ were recruited from each setting, one to recruit female faculty members and one to recruit from the male faculty. The exception was in Princess Nora University and King Abdul-Aziz University which are only for female faculty members, and thus had only one champion in each setting. Of the total of eight champions, two, one from Princesses Noura and another from Immam Abdurhaman universities, agreed to be champions for the surveys and focus groups. All the champions identified the numbers of potential participants who met the eligibility criteria. The researcher prepared the required number of packs, and the ‘champions’ distributed them to participants. The pack consisted of the questionnaires and participation information that summarised the study and the method of returning the completed packs. The ‘champions’ distributed the packs to the faculties member offices. All the champions received questionnaire packs from the researcher by hand.

The researcher provided sealed boxes in the available central place of each site of the colleges (the main staff room) to retain the packs. Participants returned the packs after completion of the questionnaires, and then dropped them into the sealed box located in the staff room to ensure anonymity. The time of completion was around 2 to 3 weeks in each site. The researcher met each of the champions in their settings in order to receive the completed packs.

6.4.2 Participants, Return Rates and Settings

Three hundred and ten participants were approached in five nursing colleges across Saudi Arabia from 22 December 2019 to 24 February 2020. Two hundred and sixty completed questionnaires were returned. The total response rate was 83.87% (see Table 6.1). The numbers of male and female participants from each site are presented in Figure 6.8.

Table 6.1: Eligible Participants and Returned Questionnaires Per Site

Name of University	Eligible Participants	Returned Questionnaires (%)
University of Hail (UOH)	81	60 (74.1)
King Saud university (KSU)	88	81(92.0)
Princess Nora university (PNU)	35	29 (82.9)

King Abdul-Aziz university (KAU)	40	32 (80.0)
Imam Abdurrahman university (IAU)	66	58 (87.9)

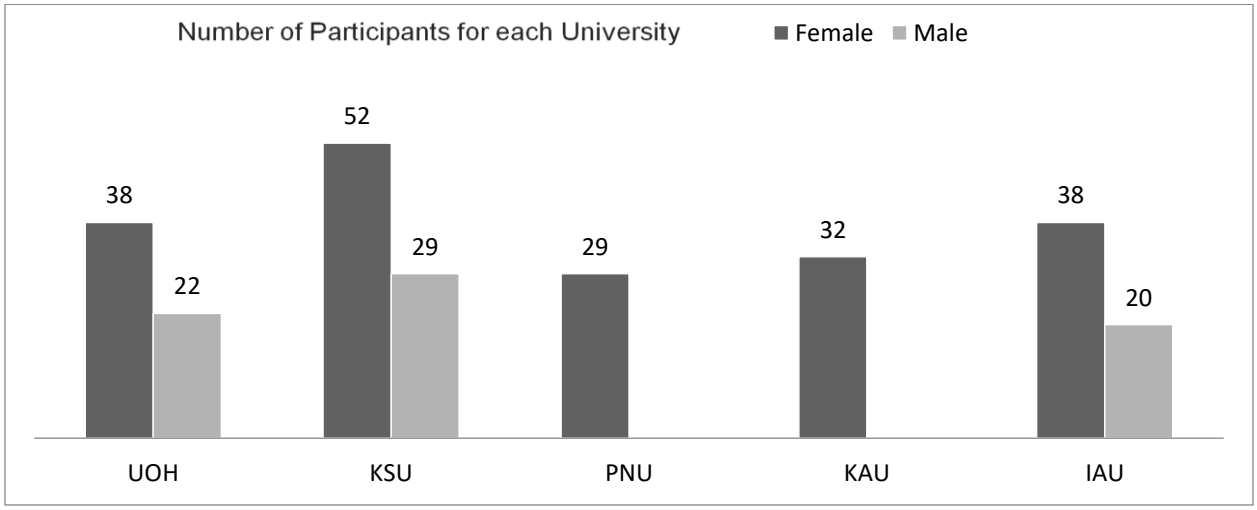


Figure 6.8: Numbers of Males and Females Participants from Each Site

UOH: University of Hail, KSU: King Saud university, PNU: Princess Nora university, KAU: King Abdul-Aziz university, IAU: Imam Abdurrahman university

6.4.3 Completion Characteristics

The completion rate of the study questionnaires was high; it ranged between 97 and 100% as Table 6.2 shows.

Table 6.2: Completion Rate

Scales	Number of items	Expected total items (x 260 participants)	Missing item		Completion Rate (%)
			N	%	
QEEW2	52	13520	8	0.07	97.94
SSEIT	33	8580	6	0.06	98.93
MBI	16	4160	4	0.10	99.90
UWES	17	4420	2	0.05	99.95
WEMWBS	14	3640	1	0.03	99.97
JDI	90	23400	2	0.01	99.99
GSF	10	2600	0	0.00	100.00
ITR	13	3380	2	0.06	99.94

6.4.4 Preliminary Examination of Data

The collected questionnaires were entered into SPSS version 24. Data entry was rechecked for any errors in entry by randomly re-entering 20% of the questionnaire forms. Data was also screened and cleaned by running frequency counts and descriptive tables to detect any unusual data error. No errors were detected.

To maintain the integrity of data, the pattern and number of missing data were identified by visual checking. The missing items for each scale were calculated and managed, as Table 3 shows. For the QEEW2 and JDI, the missing items were managed by following the corresponding clear instructions of how to deal with missing data. For the other scales that had no instructions for missing data, these were managed as recommended by Tabachnick & Fidell (2014). Thus, with the missing ≤10%, the missed items were substituted by the individual mean, while >10% missing data were excluded from further analysis.

Table 6.3: Missing Items by Scales

Scale /subscale	Missed Item N	Participant code (ID)	Dealing with Missing Data
QEEW2 – Emotional Workload	12	7	Missing data not included and deducted from maximum attainable score as per scale instructions; score calculated by summing-up the points, dividing by the number of items answered multiplied by 3, and this fraction is multiplied by 100
QEEW2 – Relationship with supervisor	30 29 33	10 124 189	Same as previous as per scale instructions.
QEEW2 – Relationship with colleagues	36	48	Same as previous as per scale instructions.
QEEW2 – Commitment	51 49 49	75 59 162	Same as previous as per scale instructions.
SSEIT	1 9 11 18 22 28	172 95 173 189 203 209	Replaced by the mean of the participant summed score.
JDI-supervision	6 18	237 255	Replaced by 1 Replaced by 1
MBI-EX	6	152	Replaced by mean of participant summed subscale score
MBI-CY	8	23	Replaced by mean of participant summed subscale score

Scale /subscale	Missed Item N	Participant code (ID)	Dealing with Missing Data
MBI-PE	10	182	Replaced by mean of participant summed subscale score
WEMWBS	1	36	Replaced by mean of participant summed scale score
UWES-AB	6 6	51 112	Replaced by mean of participant summed scale score
ITR	6 11	165 231	Replaced by mean of participant summed scale score

Following the cleaning and managing the missing data, all eight scales (QEEW2, SSEIT, WEMWBS, MBI, UWSU, GSE, JDI, ITR) were scored and computed. For the three scales that had negative items (QEEW2, SSEIT, JDI), the negative items were reverse scored. This was also done for the MBI-PE in the multivariate analyses (Maslach et al., 1996).

6.4.5 Participants' Characteristics

Participants' demographic and professional characteristics are presented in Table 4. Their age ranged from 25 to 67 years, with mean 41.57 years, and 43.2% were Saudi. Most of them were married (80%); 36.9% were assistant professors while the professors were the least in number (2.3%), and most of the sample were from the medical-surgical department (40%). Participants' experience in academia ranged from 2 to 36 years, and from <1 to 30 years in their current institution.

Table 6.4: Participants' Demographic and Professional Characteristics

Characteristics	**Frequency (%)**
Age:	
Range	24-67
Mean	41.57 (9.00)
Median	41
Nationality:	
Saudi	111 (43.2)
Non-Saudi	149 (56.8)
Gender:	
Male	71 (27.3)
Female	189 (72.7)
Marital status:	
Married	208 (80.0)
Single	40 (15.4)
Divorced	11 (4.2)
Widowed	1 (0.4)
Department:	
Medical-surgical	105 (40.0)
Maternity and Child Health	46 (17.7)

Characteristics	Frequency (%)
Administration and Education	59 (22.7)
Community and mental health	50 (19.2)
Academic rank:	
Professor	6 (2.3)
Associate Professor	20 (7.7)
Assistant Professor	96 (36.9)
Lecturer	89 (34.2)
Demonstrator	49 (18.8)
Qualification:	
PhD	129 (49.6)
Master	102 (39.2)
Bachelor	29 (11.2)
Experience in Academia:	
Range	2-36
Mean	13.32(7.44)
Median	12
Experience in institution:	
Range	<1-30
Mean	7.36 (4.89)
Median	7

6.5 Descriptive Statistics of Questionnaire Data

Descriptive statistics present the mean, standard deviation, and range of scores of the scales and subscales used (see Table 6.5).

Table 6.5: Summary of Scales /Subscales Statistics

Scales	Mean	Standard Deviation	Median	Min	Max	Range
QEEW2- Job Autonomy	30.80	19.89	33.33	.00	100.00	100.00
QEEW2- Pace Amount Work	50.70	18.64	50.00	11.11	100.00	88.89
QEEW2- Emotional Load	44.56	20.82	40.00	.00	100.00	100.00
QEEW2- Mental Load	71.76	20.35	75.00	8.33	100.00	91.67
QEEW2- Physical Strength Effort	39.14	25.64	33.33	.00	100.00	100.00
QEEW2- Role Conflict	36.08	19.94	33.33	.00	100.00	100.00
QEEW2-Relation Superior	30.16	18.56	33.33	.00	94.44	94.44
QEEW2-Relation Colleague	31.26	17.74	33.33	.00	72.22	72.22
QEEW2-Career Development	31.442	20.423	25.00	.00	91.67	91.67
QEEW2-Pay	37.820	23.585	33.33	.00	100.00	100.00
QEEW2-Organizational Commitment	34.599	17.845	33.33	.00	100.00	100.00
QEEW2-Working in this organization	29.326	24.126	25.00	.00	100.00	100.00
SSEIT-Perception of Emotion	38.07	6.04	39.00	18.00	50.00	32.00
SSEIT Managing Own Emotions	36.12	5.43	37.00	14.00	45.00	31.00
SSEIT Managing Others' Emotions	31.62	4.86	32.00	13.00	40.00	27.00
SSEIT - Utilization of Emotion	23.87	3.95	24.00	9.00	30.00	21.00
SSEIT Scores	129.67	18.68	131.00	55.00	165.00	110.00
GSE Scores	32.32	5.27	33.00	10.00	40.00	30.00
GSE Mean	3.23	.53	3.30	1.00	4.00	3.00

Scales	Mean	Standard Deviation	Median	Min	Max	Range
JDI- People Score	42.97	12.36	48.00	.00	54.00	54.00
JDI - Job Score	44.98	10.18	48.50	6.00	54.00	48.00
JDI- Work Score	39.86	11.10	42.00	.00	54.00	54.00
JDI - Pay Score	34.52	15.79	36.00	.00	54.00	54.00
JDI- Promotion Score	25.72	16.00	24.00	.00	54.00	54.00
JDI - Supervision Score	40.99	11.67	45.00	4.00	54.00	50.00
MBI -EX Scores	2.80	1.53	2.80	.00	6.00	6.00
MBI- CY Scores	2.49	1.41	2.40	.00	5.80	5.80
MBI -PE Scores	4.68	1.12	5.00	1.00	6.00	5.00
WEMWBS Scores	57.10	9.14	57.00	25.00	70.00	45.00
UWES-Vigour	4.62	.94	4.75	1.33	6.00	4.67
UWES -Dedication	4.88	1.00	5.00	1.60	6.00	4.40
UWES -Absorption	4.60	.94	4.67	1.33	6.00	4.67
ITR Score	38.73	7.05	38.00	13.00	52.00	39.00

Table 6.6: Normality Distribution Test for Study Questionnaires

Scales	Skewness			Kurtosis		
	Value	SE	Z	Value	SE	Z
QEEW2- JOB AUTONOMY	-.330	.151	-2.185	-.398	.301	-1.322
QEEW2- Pace Amount Work	.212	.151	1.402	-.138	.301	-.458
QEEW2- Emotional Load	.585	.151	3.873	.136	.301	.451
QEEW2- Mental Load	-.495	.151	-3.276	-.233	.301	-.774
QEEW2- Physical Strength Effort	.274	.151	1.810	-.479	.301	-1.591
QEEW2- Role Conflict	.791	.151	5.234	.729	.301	2.421
QEEW2-Relation Superior	.053	.151	-.350	-.536	.301	-1.780
QEEW2-Relation Colleague	.038	.151	.253	-.815	.301	-2.707
QEEW2-Career Development	.316	.151	-2.091	-.284	.301	-.943
QEEW2-Pay	.364	.151	2.407	-.297	.301	-.986
QEEW2-Organizational Commitment	-.428	.151	-2,834	.554	.301	1.840
SSEIT-Perception of Emotion	-.428	.151	-2.834	.272	.301	.903
SSEIT Managing Own Emotions	-.931	.151	-6.165	1.371	.301	4.554
SSEIT Managing Others' Emotions	-.888	.151	-5.88	1.446	.301	4.803
SSEIT - Utilization of Emotion	-.900	.151	-6.556	1.233	.301	4.418
SSEIT Scores	-.988	.151	-6.543	1.593	.301	5.292
GSE Scores	-1.119	.151	-7.410	2.321	.301	7.710
GSE Mean	-1.119	.151	-7.410	2.321	.301	7.710
JDI- People Score	-1.332	.151	-8.821	1.282	.301	4.259
JDI - Job Score	-1.526	.151	-10.105	2.121	.301	7.046
JDI- Work Score	-1.256	.151	-8.317	1.441	.301	4.787
JDI - Pay Score	-.552	.151	-3.655	-.769	.301	-2.554
JDI- Promotion Score	.191	.151	1.264	-1.125	.301	-3.737
JDI - Supervision Score	-1.109	.151	-7.344	.613	.301	2.036
JDI- Total Score	-.818	.151	-5.41	.538	.301	1.786
MBI -EX Scores	0.084	.151	.556	-1.068	.301	-3.548
MBI- CY Scores	.303	.151	2.006	-.727	.301	-2.415
MBI -PE Scores	-.910	.151	-6.026	.299	.301	.993

Scales	Skewness			Kurtosis		
	Value	SE	Z	Value	SE	Z
WEMWBS Scores	-.670	.151	-4.437	.463	.301	1.538
UWES-Vigor	-.761	.151	-5.039	.599	.301	1.990
UWES –Dedication	-.936	.151	-6.198	.392	.301	1.302
UWES –Absorption	-.736	.151	-4.874	.325	.301	1.079
UWES- Total Scores	-.938	.151	-6.211	.956	.301	3.176
ITR Score	-.151	.151	-1.00	.196	.301	.651
Age	.202	.151	1.337	-.647	.301	-2.149
Experience in academia	.647	.151	4.284	.041	.301	.136
Experience in current institution	.983	.151	6.509	2.625	.301	8.720

Testing normal distribution, according to z values, all QEEW2 subscales were normally distributed except the emotional load and role conflict. For SSEIT, only the perception of emotion was normally distributed. For JDI, only promotion was normally distributed. Meanwhile, MBI-CY and MBI-EX, as well as WEMBS, and all UWES subscales and total were not normally distributed. As for the demographic and professional characteristics, only age was normally distributed (see Table 6.6).

Data were also examined for outliers by checking histograms, Q-Plots and Boxplots. Some outliers were detected. Hence, the normality of these variables was checked, and results compared in the presence and absence of these outliers (when kept and when removed). In cases of no influence they were kept, otherwise they were removed.

Table 6.7: Cronbach's Alpha Coefficients for the Totals of the Scales

Scales	Cronbach's Alpha Coefficients
QEEW2	.906
SSEIT	.948
GSF	.900
MBI	.807
UWES	.912
WEMWBS	.942
JDI	.949
ITR	.881

Table 6.8: Cronbach's Alphas for Subscales

Scales and subscales	Cronbach's Alpha Coefficients
QEEW2:	
Job Autonomy	.763
Pace & Amount Work	.758
Emotional Load	.812
Mental Load	.736
Physical Strength	.800
Role Conflict	.851
Relationship with Supervisors	.732
Relationship with Colleagues	.729
Career Development	.859
Pay	.911
Organisational Commitment	.854
Satisfaction Working in Organisation	ONLY ONE ITEM
SSEIT:	
Perception of Emotion	.832
Managing Own Emotions	.836
Managing Others' Emotions	.826
Utilization of Emotion	.820
JDI:	
People	.896
Jobs	.853
Works	.837
Pay	.830
Promotion	.816
Supervision	.864
MBI:	
Emotional Exhaustion (EX)	.892
Cynicism (CY)	.747
Professional Efficacy (PE)	.825
UWES:	
Vigour	.790
Dedication	.822
Absorption	.737

Cronbach's alpha coefficients were calculated for all scales and subscales to assess their internal consistency. A coefficient 0.7 or higher is considered acceptable. For the totals of the scales, Cronbach's alphas coefficients ranged between 0.807 and 0.949 (Table 6.7), and for individual subscales they ranged between 0.737 and 0.896 (Table 6. 8).

As illustrated in Table 6.9, a large percentage of the participants had high levels of burnout, particularly in MBI-CY (55.4%). Only around one-third (36.9%) had high mental wellbeing. Meanwhile, approximately three-quarters of them (74.2%) had high emotional intelligence, and 56.9% had high work engagement.

Table 6.9: Participants' Categorised Levels of Burnout, Mental Wellbeing, Emotional Intelligence, and Work Engagement

Level	Burnout			Mental wellbeing	Emotional intelligence	Work engagement
	MBI – EX N (%)	MBI – CY N (%)	MBI – PE N (%)	WEMWBS N (%)	SSEIT N (%)	UWES N (%)
Low	100 (38.5)	42(16.2)	65(25)	21 (8.1)	5 (1.9)	10 (3.9)
Moderate	52 (20)	74(28.5)	63(24.2)	143 (55)	62 (23.8)	102 (39.2)
High	108 (41.5)	144(55.4)	132(50.8)	96 (36.9)	193 (74.2)	148(56.9)

Inferential Statistical Analyses for the study to address the research questions RQ1, RQ3, and RQ4

RQ1: *To what extent do the demographic characteristics of nursing faculties influence the stress outcomes, work engagement and intention to remain*?

Testing Differences

The Mann-Whitney U test was used to explore the differences in stress outcomes, work engagement and intention to remain by gender, nationality, age, and experience in academia and in current institution. This non-parametric test (Mann-Whitney U) was used because some data was not normally distributed (Robert & Casella, 2004). For this analysis, the medians of these demographic variables were used to divide the sample into two equal categories, and the Mann-Whitney U test was applied to identify the differences between the two categories of each variable through comparing the mean ranks. The medians calculated and used for categorization were 41 years for age, 12 years for experience in academia, and 7 years for experience in institution.

Table 6.10: Differences in Stress Outcomes Burnout and Job Satisfaction by Gender

Scales and subscales		Gender	N	Mean Rank	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Burnout	MBI-EX	Male	71	110.32	5277.000	-2.654	.008
		Female	189	138.08			
Job satisfaction	JDI-people	Male	71	150.99	5255.000	-2.721	.007
		Female	189	122.80			
	JDI-work	Male	71	147.23	5522.000	-2.205	.027
		Female	189	124.22			
	JDI-supervision	Male	71	151.87	5192.500	-2.816	.005
		Female	189	122.47			

The results of the Mann-Whitney test indicated that males had less burnout due to emotional exhaustion (MBI-EX) (p=0.008) and higher job satisfaction (people: p=0.007; work: p=0.027; supervision: p=0.005) in comparison with female participants (see Table 6.10). No statistically significant differences were revealed in the remaining scales and in MBI and JDI subscales.

Table 6.11: Differences in Burnout, Mental Wellbeing, Job Satisfaction, Stress Outcomes, Work Engagement, and Commitment by Nationality

Scales and subscales		Nationality	N	Mean Rank	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Burnout	MBI- EX	Saudi	111	145.97	6552.500	-2.865	.004
		Non-Saudi	149	118.98			
	MBI-CY	Saudi	111	141.25	7076.000	-1.993	.046
		Non-Saudi	149	122.49			
Mental Wellbeing	WEMWBS	Saudi	111	112.81	6305.500	-3.278	.001
		Non-Saudi	149	143.68			
Job Satisfaction	JIG	Saudi	111	119.80	7082.000	-2.001	.045
		Non-Saudi	149	138.47			
	JDI-Pay	Saudi	111	117.27	6801.000	-2.461	.014
		Non-Saudi	149	140.36			
	JDI-supervision	Saudi	111	115.57	6612.000	-2.772	.006
		Non-Saudi	149	141.62			
Work Engagement	UWES-Vigour	Saudi	111	104.86	5424.000	-4.753	.000
		Non-Saudi	149	149.60			
Commitment	Commitment	Saudi	111	143.13	6757.000	-2.451	.014
		Non-Saudi	149	120.16			

As presented in Table 6.11, Saudi participants had significantly higher burnout (MBI-EX: p=0.004; MBI-Cy: p=0.046), and higher commitment (p=.014). Conversely, Non-Saudis had a

higher level of mental wellbeing (WEMBS: p=0.001) and higher job satisfaction regarding JIG, pay, and supervision (p=0.045, p=0.014, and p=0.006 respectively). Non-Saudis also had greater engagement (UWES-vigor: p=0.000) than Saudis. No statistically significant differences were revealed in the remaining scales and subscales.

Table 6.12: Differences in in Burnout, Mental Wellbeing, Job Satisfaction, and Work Engagement by Age Categories

Scales and subscales		Age categories	N	Mean Rank	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Burnout	MBI- EX	<41	123	144.25	6734.000	-2.797	.005
		41+	137	118.15			
	MBI-CY	<41	123	143.14	6870.500	-2.572	.010
		41+	137	119.15			
Mental wellbeing	WEMWBS	<41	123	118.71	6975.000	-2.399	.016
		41+	137	141.09			
Job satisfaction	JDI-Work	<41	123	118.04	7724.000	-1.171	.242
		41+	137	141.68			
Work engagement	UWES-Vigor	<41	123	107.51	5598.000	-4.679	.000
		41+	137	151.14			
	UWES-Dedication	<41	123	102.50	4981.000	-5.716	.000
		41+	137	155.64			
	UWES-Absorption	<41	123	110.09	5915.000	-4.155	.000
		41+	137	148.82			

Table 6.12 shows that participants aged less than 41 years had significantly higher scores of burnout (MBI-EX: p=0.005 and MBI-CY: p=0.010). Conversely, those aged 41 years or older had significantly higher scores of mental wellbeing (p=0.016), as well as work engagement vigour, dedication, and absorption (p=0.000). No statistically significant difference in job satisfaction was revealed between the two age groups.

Table 6.13: Differences in in Burnout, Mental Wellbeing, Job Satisfaction, Work Engagement, and Intention to Remain by Categories of Experience in Academia

Scales and subscales		Experience in Academia (years)	N	Mean Rank	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Burnout	MBI- EX	<12	120	141.06	7013.000	-2.209	.027
		12+	139	120.45			
	MBI-CY	<12	120	145.44	6487.500	-3.086	.002
		12+	139	116.67			
Mental Wellbeing	WEMWBS	<12	120	120.47	7196.500	-1.904	.057
		12+	139	138.23			
Job satisfaction	JDI-Work	<12	120	112.50	6239.500	-3.504	.000
		12+	139	145.11			
Work engagement	UWES-Vigor	<12	120	113.18	6322.000	-3.363	.001
		12+	139	144.52			
	UWES-Dedication	<12	120	111.35	6102.000	-3.740	.000
		12+	139	146.10			
	UWES-Absorption	<12	120	113.32	6338.500	-3.336	.001
		12+	139	144.40			
Intention to Remain	ITR	<12	120	119.87	7124.500	-2.024	.043
		12+	139	138.74			

Participants with less than 12 years of experience in academia had significantly higher burnouts (MBI-EX: p=0.027 and MBI-CY: p=0.002) in comparison with those having 12 or more years of experience in academia (see Table 6.13). In addition they had also significantly lower job satisfaction (JDI-work) (p=0.000), lower intention to remain (p=0.043), as well as lower work engagement, vigour (p=0.001), dedication (p=0.000), and absorption (p=0.001). No statistically significant differences were revealed in the remaining scales and subscales.

As regards experience in current institution, the results (not shown in table) demonstrated that those with less than 7 years of experience had greater job satisfaction with their pay (JDI-pay: p=0.005) compared with those having 7 or more years of experience in their current institution.

Testing Associations

Spearman correlation analyses (non-normality distribution test) were used to identify significant associations between the demographic characteristics (age, experience in academia, and experience in current institution) of participants and their scores of stress outcomes, work engagement, and intention to remain (Adler & Parmryd, 2010).

Table 6.14: Spearman's rho correlation between participants' age, experience in academia, and experience in institution and their burnout, wellbeing, and job satisfaction scores

Correlation's coefficient (r)		Burnout (Higher score= More burnout)		higher score= less burnout	Wellbeing (Higher score= more wellbeing)	JIG and JDI Job Descriptive Index (Higher score=higher satisfaction)					
		MBI – EX	MBI – CY	MBI - PE	WEMWBS	JIG- Job Score	JDI - People Score	JDI - Work Score	JDI - Pay	JDI - Promotion	JDI - Supervision
Age	R	-.203**	-.183**	.273**	.188**	.103	.078	.206**	-.041	-.080	.108
	p (2-tailed)	.001	.003	.000	.002	.097	.211	.001	.514	.200	.082
Exp in Academia	R	-.134*	-.166**	.232**	.123*	.081	.154*	.251**	-.036	-.045	.083
	p (2-tailed)	.032	.007	.000	.048	.194	.013	.000	.561	.475	.183
Exp in current institution	R	.014	-.010	.031	.005	-.080	.026	.010	-.180**	-.075	-.049
	p (2-tailed)	.824	.877	.622	.941	.198	.679	.867	.004	.228	.428

*. Correlation is significant at <0.05 level (2-tailed) **. Correlation is significant at <0.01 level (2-tailed)

Table 6.14 demonstrates that older participants reported less burnout MBI-EX (r=-0.203), MBI-CY (r=-0.183), and MBI-PE (r=0.273); they also reported a high level of mental well-being WEMWBS (r=0.188), as well as greater job satisfaction (JDI-work r=0.206). As regards years of experience in academia, the table shows similar correlations as for age, in addition to greater job satisfaction to JDI-people (r=0.154). As for experience in current institution, they were less satisfied with their pay JDI-pay (r=-.180).

Table 6.15: Spearman's rho correlation between participants' age, experience in academia, and experience in institution and their scores of work engagement, commitment, and intention to remain (ITR)

Correlation coefficient (r)		Work engagement (High score =more engagement			Commitment (High score = Low commitment	ITR (High score =more intention to remain
		UWES-VI	UWES-DE	UWES-AB		
Age	R	.324**	.378**	.308**	-.110	.099
	p (2-tailed)	.000	.000	.000	.075	.112
Exp in Academia	R	.216**	.273**	.227**	-.119	.165**
	p (2-tailed)	.000	.000	.000	.056	.008
Exp in current institution	R	-.014	.045	.076	.003	.035
	p (2-tailed)	.816	.473	.224	.960	.578

*. Correlation is significant at <0.05 level (2-tailed) **. Correlation is significant at <0.01 level (2-tailed)

Table 6.15 illustrates that older participants were more engaged in their work than younger, indicating more engagement with increasing age. This was shown in all engagement subscales of vigour (r=0.324), dedication (r=0.378), and absorption (r=0.308). Similar correlations were revealed between participants' experience in academia and their work engagement, vigour (r=0.216), dedication (r=0.273), and absorption (r=0.227). Additionally, those with longer experience in academia are more likely to stay in their work (r=0.165).

***RQ3**: Which personal characteristics, job demands, job resources and personal resources predict or are associated with a- Stress outcomes (the negative arm of the JDR model); b- Work engagement and commitment (the positive arm of the JDR model)?*

This research question was addressed firstly by using correlation testing to identify the significant correlations between job demands, job resources and personal resources with a- stress outcomes (burnout (MBI)), mental wellbeing (WEMWBS), and Job satisfaction (JDI) as the negative arm; and then b- with work engagement (UWES) and commitment (QEEW2) as the positive arm. Subsequently, multiple regression analyses were conducted to identify which personal and professional characteristics (age, gender, nationality, experience in academia and current institution), job demands, job resources and personal resources predicted the negative and the positive JDR arms' variables.

Table 6.16: Spearman rho correlation between Job demands (QEEW2) and stress outcomes (MBI, WEMWBS, and JDI) as negative arm of JD-R model

Job demands (Higher score = worse work condition)		Burnout (Higher score= more burnout)		Burnout (Higher score= less burnout)	Wellbeing (Higher score= more wellbeing)	JIG and JDI Job Descriptive Index (Higher score=higher satisfaction)					
		MBI – EX	MBI – CY	MBI – PE	WEMWBS	JIG- Job	JDI - People	JDI - Work	JDI - Pay	JDI - Promotion	JDI - Supervision
QEEW2 - Pace & amount of work	r	.436**	.368**	-.214**	-.228**	-.246**	-.222**	-.307**	-.284**	-.017	-.167**
	p (2-tailed)	.000	.000	.001	.000	.000	.000	.000	.000	.788	.007
QEEW2- Emotional workload	r	.487**	.381**	-.265**	-.343**	-.264**	-.266**	-.362**	-.265**	-.078	-.151*
	p (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.211	.015
QEEW2 – Mental workload	r	.061	-.128*	.340**	.219**	.051	.157*	.097	-.067	-.031	.178**
	p (2-tailed)	.325	.039	.000	.000	.416	.011	.118	.285	.624	.004
QEEW2 – Physical effort	r	.303**	.234**	-.180**	-.138*	-.156*	-.125*	-.173**	-.121	-.063	-.094
	p (2-tailed)	.000	.000	.004	.026	.012	.044	.005	.052	.313	.129
QEEW2 – Role conflicts	r	.475**	.420**	-.446**	-.406**	-.348**	-.330**	-.375**	-.256**	-.208**	-.313**
	p (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000

*. Correlation is significant at <0.05 level (2-tailed) **. Correlation is significant at <0.01 level (2-tailed)

Table 6.16 shows that an increase in pace and amount of work, emotional workload, physical effort and role conflict leads to experience of more burnout, low level of mental wellbeing and a reduction in some elements of job satisfaction. The unexpected result is that an increase in mental workload leads to a decrease in burnout and an increase in the level of mental wellbeing, and an increase in some elements of job satisfaction.

Table 6.17: Spearman rho Correlation between Job Resources (QEEW2) and Work Engagement and Commitment (positive arm of JD-R model)

Job resources (Higher score=worse work condition)		Work engagement (High score =more engagement			Commitment (High score = worse commitment)
		UWES-VI	UWES-DE	UWES-AB	
QEEW2 – Job autonomy	R	-.272**	-.249**	-.161**	.285**
	p (2-tailed)	.000	.000	.009	.000
QEEW2 – Relationship with supervisor	R	-.279**	-.279**	-.147*	.350**
	p (2-tailed)	.000	.000	.018	.000
QEEW2 – Relationships with colleagues	R	-.165**	-.200**	-.104	.225**
	p (2-tailed)	.008	.001	.093	.000
QEEW2 – Career development and support	R	-.203**	-.260**	-.158*	.566**
	p (2-tailed)	.001	.000	.011	.000
QEEW2 – Remuneration (pay)	R	-.336**	-.312**	-.180**	.579**
	p (2-tailed)	.000	.000	.004	.000

*. Correlation is significant at <0.05 level (2-tailed) **. Correlation is significant at <0.01 level (2-tailed)

For the positive arm, the statistically significant negative correlations between the scores of various subscales of job resources and those of work engagement indicate that the participants reporting low autonomy, worse relationships with supervisors and colleagues, limited career development and support, and low payment, were less likely to engage in their work. On the other hand, the positive correlations between the scores of various subscales of job resources and those of work commitment indicate that the low job resources are associated with low commitment (see Table 6.17).

Table 6.18: Spearman rho Correlation between personal resources and work engagement and commitment (positive arm of JD-R model)

Personal resources (Higher score = more resources)			Work engagement (High score = more engagement)			Commitment (High score = worse Commitment
			UWES-VI	UWES-DE	UWES-AB	
Schutte Self-Report Emotional Intelligence	SSEIT-Perception of Emotion	R	.366**	.328**	.249**	-.323**
		p (2-tailed)	0.000	0.000	0.000	.000
	SSEIT-Managing own Emotions	R	.443**	.397**	.316**	-.280**
		p (2-tailed)	0.000	0.000	0.000	.000
	SSEIT-Managing others' Emotions	R	.352**	.336**	.224**	-.241**
		p (2-tailed)	0.000	0.000	0.000	.000
	SSEIT-Utilization of Emotion	R	.307**	.223**	.188**	-.158*
		p (2-tailed)	0.000	0.000	0.002	.011
	SSEIT Scores	R	.412**	.367**	.278**	-.294**
		p (2-tailed)	0.000	0.000	0.000	.000
Self-efficacy (GSE)		R	.465**	.443**	.401**	-.229**
		p (2-tailed)	0.000	0.000	0.000	.000

*. Correlation is significant at <0.05 level (2-tailed) **. Correlation is significant at <0.01 level (2-tailed)

Regarding the personal resources in the positive arm, the statistically significant positive correlations between the scores of personal resources and those of work engagement imply that the participants reporting high personal resources tend to be more engaged in their work. Meanwhile, the negative correlations between the scores of personal resources and those of work commitment (negatively scored) indicate that high personal resources are associated with high commitment at work. This means people who had high emotional intelligence and high self-efficacy were more likely to engage in their work and be more committed to their work (Table 6.18).

6.6 Transformation of Data

Before performing the regression analyses, transformations of the previously identified skewed variables, lacking normal distribution, was carried out. Various methods of transformation were used such as logarithmic and square root ones. Moreover, reflection was undertaken for the negatively skewed variables as recommended by Tabachnick and Fidell (2007). This is done by subtraction of each individual's score from the maximum value of the variable +1. However, this should be considered in the interpretation of the results. For MBI-PE, the scoring was reversed so that all three MBI components were in the same direction of burnout (Maslach et al., 1996).

Table 6.19: Transformation of Skewed Variables

The normally distributed variables with no need for transformation				Transformed variables using log 10, square root and with reflection for -ve skewed			
Variable	Skewness	SE	z	Variable	skewness	SE	z
Job autonomy	-.330	.151	-2.185	Role conflict (log10)	-.595	.154	-3.867
Relation Superior	-.053	.151	-.350	SSEIT scores (Sqrt-reflected)	.053	.151	.352
Relation Colleague	.038	.151	.253	GSE score (Sqrt-reflected)	.104	.151	.690
Career Development	-.316	.151	-2.091	JDI total (Sqrt-reflected)	-.013	.151	-.088
Pay	-.364	.151	-2.407	MBI-PE (reversed) Sqrt	-.222	.151	-1.470
Pace Amount	.212	.151	1.402	WEMWBS (Sqrt-reflected)	-.211	.151	-1.397
Mental Load	-.495	.151	-3.276	Engagement total (Log10-reflected	.007	.151	.050
Emotional load	.585	.151	3.873	Experience Acad. (sqrt)	-.087	.151	-.574
Physical Effort	.273	.151	1.810	Experience Inst. (sqrt)	-.357	.151	-2.362
Commitment	-.428	.151	-2.835				
MBI-EX	.084	.151	.556				
MBI-CY	.303	.151	2.006				
Age	.202	.151	1.340				

Table 6.19 presents how the skewed variables were improved with transformation. The emotional load and role conflict were the only two variables which did not improve by transformation. Thus, the original values of emotional workload before transformation were used in the regression analysis, as the histogram and Q-Q plot of these original data looked approximately normal. Meanwhile, the transformed $\log_{10}$ values for role conflict were used in

regression since it showed slight improvement with transformation in comparison with the original values.

6.6.1 Negative Arm Regressions

Five stepwise multiple regression analyses were implemented to examine the prediction ability of independent variables of job demands (pace and amount of work, emotional workload, mental workload, physical effort, role conflict), in the presence of certain demographic and professional characteristics (age, gender, nationality, experience in academia, experience in current institution) on stress outcomes as dependent variables. These latter included: 1) Burnout (MBI-EX), 2) Burnout (MBI-CY), 3) Burnout (MBI-PE), 4) Mental wellbeing (WEMBS), and 5) Job satisfaction (JDI).

Table 6.20: Relations between demographic and professional characteristics and job demands (QEEW2) as independent variables (IVs) and burnout as dependent variable (DV) for negative arm regressions

Independent variable (IVs) (demographic/professional characteristics and QEEW2)		Dependent variables (burnout)		
		MBI-EX (R1)	MBI-CY (R2)	MBI-PE (R3)
Age	R	-.203**	-.183**	.273**
	p (2-tailed)	.001	.003	.003
Gender (Mann- Whitney)	Z	-2.654**	~~-1.231~~	~~-.954~~
	p (2-tailed)	.008	~~.218~~	~~.340~~
Nationality (Mann-Whitney)	Z	-2.865**	-1.993*	-3.371**
	p (2-tailed)	.004	.046	.001
Experience in Academia	R	-.134*	-.166**	.232**
	p (2-tailed)	.032	.007	.000
Experience in current institution	R	~~.014~~	~~-.010~~	~~.031~~
	p (2-tailed)	~~.824~~	~~.877~~	~~.622~~
QEEW2 - Pace and amount of work	R	.436**	.368**	-.214**
	p (2-tailed)	0.000	0.000	. 001
QEEW2 - Emotional workload	R	.487**	.381**	-.265**
	p (2-tailed)	0.000	0.000	0.000
QEEW2 - Mental workload	R	~~0.061~~	-.128*	.340**
	p (2-tailed)	~~0.325~~	0.039	0.000
QEEW2 - Physical effort	R	.303**	.234**	-.180**
	p (2-tailed)	0.000	0.000	0.004
QEEW2 - Role conflicts	R	.475**	.420**	-.446**
	p (2-tailed)	0.000	0.000	0.000

✕ Will not be included in regression analyses (p-value not significant at 0.15)

To determine which independent variables (IVs) should be included in each regression analysis of the negative arm of JDR, bivariate and correlation analyses were conducted between the independent and dependent variables (DV). The variables included were those which were significantly related at p=<0.15 (Tabachnick & Fidell, 2014) as presented in Table 6.20.

Regression 1: Prediction of Burnout (MBI-EX) as the dependent variable (negative arm of JDR model)

The first negative arm regression analyses were performed to test the prediction ability of demographic and professional characteristics and job demands components (QEEW2) on burnout-exhaustion (MBI-EX). Prior to the regression analysis a number of assumptions were checked that should be achieved as suggested by Tabachnick and Fidell (2014) (Table 6.21). The sample size (n=260) was adequate as it was greater than 50+8m, where m=8 (260>114). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. Also, the tolerance values were all greater than 0.1 and the Variance Inflation Factors (VIF) were all less than 10, further indicating no concerns about multicollinearity. The critical Mahalanobis distance was 26.13, and Cook's distance was <0.05, thus no influencing multivariate outliers were identified. Normal probability plot and residual scatterplot indicated normality, linearity and homoscedasticity assumptions were all met.

Table 6.21: The Assumptions of the Regression 1 (Prediction of MBI-EX) Negative Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, • N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014)	• 260 >50+8x8, 260>114 • Sample size was adequate to conduct the R1
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.696 • Achieved: min: 0.498 • Achieved: max: 2.007
• No auto-correlation	• Durbin Watson: around 2	• Achieved: DW = 1.63
• Normality	• Z test <3.29 (after square root transformation of Exp of experience in academia) • Visual P-P plot/histogram	• Achieved except for emotional workload and role conflict even after transformation • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend

• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables) • No outliers with high Cook and high leverage	• Achieved: max = 0.036 • Achieved: max = 17.565 (critical 26.13 at DF=8)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Three demographic variables and one professional characteristic identified in the correlation analysis, and the four components of job demands variables were entered into the model in three steps. Age, gender and nationality were entered in Step I; experience in academia$_{(sqrt)}$ in Step II; and pace and amount of work, emotional workload, physical effort and role conflict $_{(Log\ 10)}$.in Step III.

As shown in Table 6.22, age alone explained 3.3 percent of the variation in the DV (Burnout-EX). Gender further added 2.3 percent to the adjusted r square. Meanwhile, role conflict increased the adjusted R-square by almost 20%, reaching 0.255. Emotional workload further added 5.6%, and pace and amount of work, an additional 1.3%. Thus, the final model explains 32.4% of the variation in the DV (Burnout-EX) and is a statistically significant (model ANOVA $p<0.001$). In the final model, the female gender increases the burnout-exhaustion score by .569. Each point of the role conflict score adds 0.0179 (*since it was log10 transformed, its coefficient is divided by 100*), each point of emotional workload adds 0.015, and each point of the pace and amount of work score adds .014 point to the burnout-exhaustion score.

Table 6.22: Hierarchal Stepwise Regression Analysis: Dependent Variable: MBI-EX

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	4.190	.463		9.046	.000	3.278	5.103			
	Age	-.033	.011	-.191	-3.062	.002	-.055	-.012	.037	.033	0.002
2	Constant	3.192	.590		5.408	.000	2.030	4.355			
	Age	-.033	.011	-.188	-3.052	.003	-.054	-.012			
	Gender (F)	.566	.211	.165	2.675	.008	.149	.982	.064	.056	<0.001
3	Constant	-2.353	.859		-2.739	.007	-4.046	-.661			
	Age	-.015	.010	-.088	-1.563	.119	-.035	.004			
	Gender (F)	.711	.189	.207	3.767	.000	.339	1.083			
	Role conf. (lg10)	3.009	.369	.460	8.152	.000	2.282	3.736	.264	.255	<0.001
4	Constant	-1.873	.833		-2.249	.025	-3.513	-.233			
	Age	-.008	.010	-.044	-.804	.422	-.027	.011			
	Gender (F)	.601	.183	.175	3.282	.001	.240	.961			
	Role conf. (lg10)	1.965	.422	.300	4.660	.000	1.135	2.796			
	Emotional workload	.022	.005	.298	4.583	.000	.012	.031	.322	.311	<0.001
5 Final Model	Constant	-1.851	.825		-2.245	.026	-3.475	-.227			
	Age	-.008	.009	-.044	-.814	.416	-.026	.011			
	Gender (F)	.569	.182	.166	3.128	.002	.211	.927			
	Role conf. (lg10)	1.709	.431	.261	3.967	.000	.860	2.558			
	Emotional workload	.015	.005	.210	2.846	.005	.005	.026			
	Pace & amount work	.014	.006	.171	2.419	.016	.003	.025	.338	.324	<0.001

Regression 2: Prediction of Burnout (MBI-CY) as the dependent variable (negative arm of JDR model)

This regression analysis was performed to test the prediction ability of the demographic and professional characteristics (age, nationality, and experience in academia) identified in the bivariate and correlation analysis, as well as the job demands components (pace and amount of work, emotional workload, mental workload, physical effort, and role conflict) on burnout-cynicism (MBI-CY).

Table 6.23: The Assumptions of the Regression 2 (Prediction of MBI-CY) Negative Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 249>50+8x8, 249>114 • Sample size was adequate to conduct the R2
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.696 • Achieved: min: 0.488 • Achieved: max: 2.049
• No autocorrelation	• Durbin Watson: around 2	• Achieved: DW = 1.97
• Normality	• Z test <3.29 (after square root transformation of Exp of experience in academia) • Visual P-P plot/histogram	• Achieved except for emotional workload and role conflict even after transformation. • Achieved
• Normality of residuals	• Residual's plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables • No outliers with high Cook and high leverage	• Achieved: max = 0.033 • Achieved: max = 20.108 (critical 26.13)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Prior to conducting the regression analysis, a number of assumptions were checked (Table 6.23) that should be achieved, as suggested by Tabachnick and Fidell (2014). The sample size was adequate as it was greater than 50+8m, where m=8, (249>114). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. Also, the tolerance values were all greater than 0.1, VIFs

less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (26.13), and maximum Cook's distance was <0.05 after exclusion of a number of multivariate outliers identified based on Cook's distance. The multiple regression analyses were conducted with and without outliers. The influence of outliers was assessed according to the suggestion of Tabachnick and Fidell (2014). Since their influence was evident, the results are presented without outliers. Normal probability plot and residual scatterplot indicated normality, linearity and homoscedasticity assumptions were all met.

Two demographic variables, one professional characteristic, and five components of job demands variables were entered into the model in three steps: Step I: age and nationality; Step II: experience in academia (sqrt); Step III: pace and amount of work, emotional workload, mental workload, physical effort and role conflict (Log 10) . As shown in Table 6.24, age alone explained 2.3% of the variation in the DV (MBI-CY). The experience in academia did not add to the model adjusted R-square, while pace added 14.1% to increase the adjusted R-square to 0.164. The mental workload further added 4.1% to the model, and the emotional workload added 3.6% more. Lastly, role conflict added 0.9% for a final adjusted R-square of 0.250 in the final model. Hence, this model explains 25% of the variation in the DV (Burnout-CY), and it is statistically significant (model ANOVA $p<0.001$). In the final model, each score point of the pace and amount of work increases the MBI-CY score by .019, while each point of mental workload decreases it by 0.015; and each point of the emotional workload score adds .014 point to the burnout-cynicism score. As for the role conflict, each score point adds 0.00842 points to the dependent variable (since it was log10 transformed, its coefficient is divided by 100).

Table 6.24: Hierarchical Stepwise Regression Analysis: Dependent Variable: MBI- CY

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	3.594	.428		8.399	.000	2.751	4.436			
	Age	-.027	.010	-.166	-2.638	.009	-.046	-.007	.027	.023	0.009
2	Constant	3.591	.428		8.389	.000	2.748	4.434			
	Age	-.018	.014	-.113	-1.286	.200	-.046	.010			
	Exp in academia (SQRT)	-.101	.116	-.076	-.871	.385	-.328	.127	.030	.023	0.022
3	Constant	1.634	.497		3.290	.001	.656	2.613			
	Age	-.004	.013	-.024	-.291	.771	-.030	.022			
	EXp in academia (SQRT)	-.133	.107	-.100	-1.238	.217	-.343	.078			
	Pace& amount work	.029	.004	.386	6.524	.000	.020	.038	.174	.164	<0.001
4	Constant	2.242	.511		4.384	.000	1.235	3.249			
	Age	-.001	.013	-.009	-.107	.915	-.027	.024			
	Exp in academia (SQRT)	-.091	.105	-.069	-.866	.388	-.298	.116			
	Pace& amount work	.034	.005	.450	7.472	.000	.025	.043			
	Mental workload	-.015	.004	-.222	-3.703	.000	-.023	-.007	.218	.205	<0.001
5	Constant	.742	.761		.976	.330	-.756	2.241			
Final	Age	.003	.013	.016	.200	.841	-.022	.027			
Model	Exp in academia (SQRT)	-.048	.103	-.036	-.470	.639	-.250	.154			
	Pace & amount work	.019	.006	.249	3.248	.001	.007	.030			
	Mental workload	-.015	.004	-.211	-3.509	.001	-.023	-.006			
	Emotional workload	.014	.005	.208	2.643	.009	.004	.025			
	Role conf. (lg10)	.842	.426	.140	1.978	.049	.003	1.681	.268	.250	<0.001

Regression 3: Prediction of Burnout (MBI-PE) (Sqrt) & reversed as the Dependent Variable (Negative Arm of JDR Model)

This regression analysis was performed to test the prediction ability of demographic and professional characteristics (age, nationality, and experience in academia) and job demands components (pace and amount of work, emotional workload, mental workload, physical effort, and role conflict) on burnout- Professional Efficacy (MBI-PE). This subscale was reverse scored so that a higher score indicates less Professional Efficacy, and thus more burnout.

Table 6.25: The Assumption of the Regression-3 (Prediction of MBI-PE) Negative Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 260 >50+8x8, 260>114 • Sample size was adequate to conduct the R3
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.696 • Achieved: min: 0.506 • Achieved: max: 1.978
• No autocorrelation	• Durbin Watson: around 2	• Achieved: DW = 1.659
• Normality	• Z test <3.29 (after square root transformation of years of experience in academia) • Visual P-P plot/histogram	• Achieved except for emotional workload and role conflict even after transformation. • Achieved
• Normality of residuals	• Residual's plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables • No outliers with high Cook and high leverage	• **Not achieved: max = 0.055 • Achieved: max = 14.986 (critical 26.13)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

**High Cook but no high leverage: not influencing regression.

Prior to conducting the regression analysis, all required assumptions were checked to be achieved (Table 6.25) as suggested by Tabachnick and Fidell (2014). The sample size (n=260) was adequate as it was greater than 50+8m, where m=8 (260>114). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. All tolerance values were greater than 0.1, and VIFs less

than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (26.13), but the maximum Cook's distance was .055, which does not achieve the required value of <0.05, as there were two multivariate outliers. The multiple regression analyses were conducted with and without outliers. The influence of outliers was assessed according to the suggestion of Tabachnick and Fidell (2014). Since there was no obvious influence of outliers on the regression analyses, the results are presented with keeping outliers. A normal probability plot and residual scatterplot indicated that the normality, linearity and homoscedasticity assumptions were all met.

Two demographic variables and one professional characteristic identified in the bivariate and correlation analyses, in addition to five components of job demands variables, were entered into the model in three steps: age and nationality in Step I; experience in academia $_{(sqrt)}$ in Step II, and pace and amount of work, emotional workload, mental workload, physical effort and role conflict $_{(log\ 10)}$ in Step III. As shown in Table 6.26, age alone explained 5.6% of the variation in the DV (MBI-PE), and experience in academia did not add to the adjusted R-square. Role conflict added 17%, and mental workload further added 7.3% so that the final model explains 29.8% of the variation in the DV (MBI-PE), and the model is statistically significant (model ANOVA $p<0.001$). In the final model, the role conflict increases the square root of the MBI-PE score by 0.01006 points (since it was log10 transformed, its coefficient is divided by 100), whereas each score point of mental workload decreases it by 0.008 points.

Table 6.26: Hierarchal Stepwise Regression Analysis: Dependent Variable: MBI-PE (reverse scored, SQRT)

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	1.653	.168		9.836	.000	1.322	1.984			
	Age	-.016	.004	-.244	-3.948	.000	-.023	-.008	.059	.056	<0.001
2	Constant	1.652	.168		9.828	.000	1.321	1.982			
	Age	-.012	.006	-.185	-2.153	.032	-.023	-.001			
	Exp in academia (SQRT)	-.044	.045	-.084	-.977	.330	-.134	.045	.063	.055	<0.001
3	Constant	-.142	.286		-.497	.620	-.706	.422			
	Age	-.008	.005	-.123	-1.571	.117	-.018	.002			
	Exp in academia (SQRT)	-.022	.041	-.041	-.522	.602	-.103	.060			
	Role conf. (lg10)	1.021	.138	.425	7.400	.000	.749	1.293	.234	.225	<0.001
4	Constant	.350	.289		1.212	.227	-.219	.918			
	Age	-.008	.005	-.123	-1.652	.100	-.017	.002			
	Exp in academia (SQRT)	.002	.039	.003	.041	.967	-.076	.079			
	Role conf. (lg10)	1.006	.131	.419	7.663	.000	.748	1.265			
	Mental workload	-.008	.001	-.278	-5.152	.000	-.011	-.005	.309	.298	<0.001

Regression 4: Prediction of Mental wellbeing (WEMBS) (reflected &sqrt) as the dependent variable (negative arm of JDR model)

Table 6.27: Relations between IVs (job demands) and DVs (WEMWBS) for the Negative Arm Regressions

Independent variables (demographic/professional characteristics and QEEW2)		Dependent variable WEMWBS (R4)
Age	r	.188**
	p (2-tailed)	.008
Gender (Mann-Whitney)	Z	-1.586
	p (2-tailed)	.113
Nationality (Mann-Whitney)	Z	-3.278**
	p (2-tailed)	.001
Experience in Academia	R	.123*
	p (2-tailed)	.045
Experience in current institution	R	~~.005~~
	p (2-tailed)	~~.941~~
QEEW2 - Pace and amount of work	r	-.228**
	p (2-tailed)	0.000
QEEW2 - Emotional workload	r	-.343**
	p (2-tailed)	0.000
QEEW2 - Mental workload	r	.219**
	p (2-tailed)	0.000
QEEW2 - Physical effort	r	-.138*
	p (2-tailed)	0.026
QEEW2 - Role conflicts	r	-.406**
	p (2-tailed)	0.000

✕ Will not be included in regression analyses (p-value not significant at 0.15)

To determine which independent variables (IVs) should be included in this regression analysis of the negative arm of JDR, bivariate and correlation analyses were conducted between the IVs and dependent variables (DVs). The variables included were those which were significantly related at p=<0.15 (Tabachnick & Fidell, 2014) as presented in Table 6.27.

This regression analysis was performed to test the prediction ability of demographic and professional characteristics (age, gender, nationality, and experience in academia), and the job demands components (pace and amount of work, emotional workload, mental workload, physical effort, and role conflict) on mental wellbeing.

Table 6.28: The Assumption of the Regression 4 (Prediction of WEMWBS) Negative Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 249 >50+8x9, 249>122 • Sample size was adequate to conduct the R4
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.692 • Achieved: min: 0.695 • Achieved: max: 1.439
• No autocorrelation	• Durbin Watson: around 2	• **NOT achieved: DW = 0.435
• Normality	• Z test <3.29 (after square root transformation of Exp of experience in academia) • Visual P-P plot/histogram	• Achieved except for emotional workload and role conflict even after transformation. • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables • No outliers with high Cook and high leverage	• Achieved: max = 0.039 • Achieved: max = 16.431 (critical (DF=9): 27.88)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

**Durbin-Watson is of more importance in time-series.

Before carrying out the regression analysis, all required assumptions were checked and achieved (see Table 6.28), as suggested by Tabachnick and Fidell (2014). The sample size was adequate as it was greater than 50+8m, where m=9 (249>122). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. All the values of tolerance were greater than 0.1, and the VIF were all less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (27.88), and the maximum Cook's distance was <0.05. Certain multivariate outliers were identified. The multiple regression analyses were conducted with and without outliers, and the influence of the outliers was assessed according to the suggestion of Tabachnick and Fidell (2014). As the influence of the outliers on the regression analyses was evident, and the model was better fitting with the removal of outliers, the results are

presented without outliers. Normal probability plot and residual scatterplot indicated that normality, linearity and homoscedasticity assumptions were all met.

Two demographic variables and one professional characteristic were identified in the bivariate and correlation analyses, and the five components of job demands scale were entered into the model in three steps: Step I: age, gender and nationality; Step II: experience in academia$_{(sqrt)}$; Step III: pace and amount of work, emotional workload, mental workload, physical effort and role conflict $_{(Log\ 10)}$. As shown in Table 6.29, nationality alone explained 3.5% of the variation in the DV (mental wellbeing), while experience in academia did not lead to any increase in the adjusted R-square. Role conflict added 15.7% to the variance and mental workload added further 3.2% to it, reaching 22% in the final model, which was statistically significant (model ANOVA $p<0.001$). In the final model, taking into consideration that the dependent variable was transformed by reflection and square-rooting, the Saudi nationality would decrease the square root of wellbeing by 0.470 points. Each score point increase in the role conflict would decrease the square root of wellbeing by 0.02249 point (since it was log10 transformed, its coefficient is divided by 100). Lastly, each score point of mental workload adds 0.012 point to it.

Table 6.29: Hierarchal Stepwise Regression Analysis: Dependent Variable: WEMWBS (reflected, SQRT)

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	3.343	.108		30.871	.000	3.129	3.556			
	Nationality-Saudi	.515	.165	.196	3.123	.002	.190	.840	.038	.035	0.002
2	Constant	3.379	.371		9.115	.000	2.649	4.109			
	Nationality- Saudi	.505	.193	.192	2.618	.009	.125	.885			
	Exp in academia (SQRT)	-.009	.090	-.007	-.102	.919	-.186	.168	.038	.031	0.008
3	Constant	-.334	.633		-.527	.599	-1.582	.914			
	Nationality- Saudi	.420	.177	.160	2.373	.018	.071	.769			
	Exp in academia (SQRT)	.072	.083	.059	.870	.385	-.091	.236			
	Role conf. (lg10)	2.291	.330	.409	6.940	.000	1.641	2.942	.198	.188	<0.001
4 Final model	Constant	.417	.661		.631	.528	-.885	1.719			
	Nationality -Saudi	.470	.174	.179	2.699	.007	.127	.813			
	Years in academia (SQRT)	.123	.083	.100	1.485	.139	-.040	.286			
	Role conf. (lg10)	2.249	.324	.401	6.945	.000	1.611	2.887			
	Mental workload	-.012	.004	-.191	-3.313	.001	-.020	-.005	.233	.220	<0.001

Regression 5: Prediction of Job satisfaction (reflected &Sqrt) (JDI) as the dependent variable (negative arm of JDR model)

To determine which independent variables (IVs) should be included in this regression analysis of the negative arm of JDR, bivariate and correlation analyses were conducted between the independent and dependent (JDI) variables. The variables included were those which were significantly related at p=<0.15 (Tabachnick & Fidell, 2014), as presented in Table 6.30.

Table 6.30: Relations between IVs (job demands) and DVs (JDI) for the Negative Arm Regressions

Independent variables (demographic/professional characteristics and QEEW2)		Dependent variables JDI total (R5)
Age	r	~~.047~~
	p (2-tailed)	~~.447~~
Gender (Mann- Whitney)	z	-2.304*
	p (2-tailed)	.021
Nationality (Mann-Whitney)	z	-2.494*
	p (2-tailed)	.013
Experience in Academia	r	~~.073~~
	p (2-tailed)	~~.243~~
Experience in current institution	r	-.113
	p (2-tailed)	.069
QEEW2 - Pace and amount of work	r	-.258**
	p (2-tailed)	0.000
QEEW2 - Emotional workload	r	-.275**
	p (2-tailed)	0.000
QEEW2 - Mental workload	r	~~.065~~
	p (2-tailed)	~~0.295~~
QEEW2 - Physical effort	r	-.146*
	p (2-tailed)	0.018
QEEW2 - Role conflicts	r	-.404**
	p (2-tailed)	0.000

✕ Will not be included in regression analyses (p-value not significant at 0.15)

This regression analysis was performed to test the prediction ability of demographic and professional characteristics (gender, nationality, and experience in institution) identified in bivariate and correlation analyses, and job demands components (pace and amount of work,

emotional workload, physical effort, and role conflict) on job satisfaction (JDI). This latter score was transformed by reflection and square rooting. Prior to the regression analysis, all required assumptions were checked and achieved, as suggested by Tabachnick and Fidell (2014) (see Table 6.31).

The sample size (n=260) was adequate as it was greater than 50+8m, where m=7 (260>106). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. All the tolerance values were greater than 0.1 and the VIFs less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (26.13), and the maximum Cook's distance was <0.05, thus no influencing multivariate outliers were identified. Normal probability plot and residual scatterplot indicated normality, linearity and homoscedasticity assumptions were all met.

Table 6.31: The Assumptions of the Regression 5 (Prediction of Job Satisfaction) Negative Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 260 >50+8x7, 260>106 • Sample size was adequate to conduct the R5
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.645 • Achieved: min: 0.903 • Achieved: max: 1.107
• No autocorrelation	• Durbin Watson: around 2	• Achieved: DW = 1.976
• Normality	• Z test <3.29 (after square root transformation of experience in academia) • Visual P-P plot/histogram	• Achieved except for emotional workload and role conflict even after transformation. • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables • No outliers with high Cook and high leverage	• Achieved: max = 0.047 • Achieved: max = 12.479 (critical (DF=7): 24.32)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Two demographic variables and one professional characteristic identified in bivariate and correlation analyses, in addition to four components of job demands variables, were entered into the model in three steps: Step I: gender and nationality; Step II: experience in institution $_{(sqrt)}$; Step

III: pace and amount of work, emotional workload, physical effort and role conflict (Log 10) . As shown in Table 6.32, nationality alone explained 2.5% of the variation in the DV (Job satisfaction). Gender added 1.4%, and experience in institution further added 0.04%, ending-up with an adjusted R-square value 0.043. Meanwhile, role conflict added 0.157 to the adjusted R-square, thus explaining 15.7% of the variation in the DV. The final model explains 20% of the variation in the DV (Job satisfaction) and is statistically significant (model ANOVA $p<0.001$). In the final model, given that the DV (JDI) was reflected and square-rooted, the female gender would then decrease the square root of job satisfaction score by 1.297 points. On the other hand, each score point of the role conflict decreases 0.005129 of this score (*since it was log10 transformed, its coefficient is divided by 100*).

Table 6.32: Hierarchal Stepwise Regression Analysis: Dependent Variable: JDI (reflected, SQRT)

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	8.758	.242		36.178	.000	8.281	9.235			
	Nation-Saudi	1.003	.371	.169	2.707	.007	.273	1.733	.029	.025	0.007
2	Constant	7.283	.728		9.999	.000	5.848	8.718			
	Nation -Saudi	.815	.378	.138	2.154	.032	.070	1.560			
	Female gender	.901	.420	.137	2.145	.033	.074	1.728	.046	.039	0.003
3	Constant	6.598	.872		7.568	.000	4.881	8.316			
	Nation -Saudi	.785	.378	.133	2.076	.039	.040	1.529			
	Female gender	.926	.419	.141	2.209	.028	.100	1.752			
	Exp. in institute (SQRT)	.259	.182	.088	1.421	.156	-.100	.618	.054	.043	0.003
4 Final model	Constant	-1.631	1.416		-1.152	.251	-4.421	1.159			
	Nation –Saudi	.273	.353	.046	.773	.440	-.423	.968			
	Female gender	1.297	.387	.197	3.351	.001	.534	2.059			
	Exp in institute (SQRT)	.270	.167	.092	1.620	.107	-.058	.598			
	Role conflict (lg10)	5.129	.730	.409	7.028	.000	3.692	6.567	.213	.200	<0.001

6.6.2 Positive Arm Regressions

Two stepwise multiple regression analyses were implemented to examine the prediction ability of the independent variable of job resources (Job Autonomy, Relationship with supervisor, Relationship with colleagues, Career development and support, and Pay) and personal resources (Emotional Intelligence [SSEIT] and Self-efficacy [GSE]), in the presence of certain demographic and job factors (age, gender, nationality, experience in academia, experience in current institution) on work engagement and commitment, as dependent variables. These include: R1) Work engagement and R2) Commitment. The scoring of work engagement is positive so that a higher score indicates more engagement. As for the job resources and commitment, as a part of the QEEW2 scale, their scores are negative so that higher scores indicate lower job resources and less commitment. In the multivariate analyses, and for the sake of easier interpretation as recommended in the tool instructions, the scores were reversed so that higher scores indicate better job resources and more commitment.

To determine which independent variables (IVs) should be included in each regression analysis of the positive arm of JDR, bivariate and correlation analyses were conducted between the independent and dependent variables. The variables included were those which were significantly related at p=<0.15 (Tabachnick & Fidell, 2014), as presented in Table 6.33.

Table 6.33: Relations between IVs (demographic and professional characteristics) and DVs (work engagement [UWES] and commitment outcomes) for the positive arm regressions

Independent variables (IVs) Demographic/**professional characteristics QEEW2, GSE, SSEIT**		**Dependent variables (DVs)**	
		UWES-total (R1)	Commitment (R2)
Age	R	.366**	-.110
	p (2-tailed)	.000	.075
Gender (Mann- Whitney)	Z	-.110	-1.015
	p (2-tailed)	.912	.310
Nationality (Mann-Whitney)	Z	-4.595**	-2.451*
	p (2-tailed)	.000	.014
Exp in Academia	R	.265**	-.119
	p (2-tailed)	.000	.056
Exp in current institution	R	.037	.003
	p (2-tailed)	.557	.960
QEEW2 - Job autonomy (JR)	R	-.265**	.285**
	p (2-tailed)	0.000	0.000
QEEW2 - Relationship with supervisor (JR)	R	-.261**	.350**
	p (2-tailed)	0.000	0.000
QEEW2 - Relationships with colleagues (JR)	R	-.168**	.225**
	p (2-tailed)	0.006	0.000
QEEW2 - Career development and support (JR)	R	-.212**	.566**
	p (2-tailed)	0.001	0.000
QEEW2 - Remuneration (pay)(JR)	R	-.282**	.579**
	p (2-tailed)	0.000	0.000
SSEIT total Score (PR)	R	.386**	-.294**
	p (2-tailed)	.000	0.000
GSE(PR)	R	.478**	-.229**
	p (2-tailed)	.000	0.000

Regression 1: Prediction of work engagement (reflected log10) (UWES) as dependent variables (positive arm of JDR model)

This regression analysis was performed to test the prediction ability of demographic and professional characteristics (age, nationality, and experience in academia), job resource components (job autonomy, relationship with supervisor, relationship with colleagues, career development and support, and pay) and personal resources (SSEIT and GSE) on work engagement. Prior to conducting the regression analysis, all required assumptions were checked and achieved, as suggested by Tabachnick and Fidell (2014) (see Table 6.34).

Table 6.34: The Assumption of the Regression1 (Prediction of Work Engagement) Positive Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 260 >50+8x10 , 260>130 • Sample size was adequate to conduct this Regression
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.696 • Achieved: min: 0.491 • Achieved: max: 2.038
• No auto-correlation	• Durbin Watson: around 2	• Achieved: DW = 1.615
• Normality	• Z test <3.29 (after transformations of experience in academia, SSEEIT, GSE) • Visual P-P plot/histogram	• Achieved • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables) • No outliers with high Cook and high leverage	• NOT Achieved: max = 0.097 • Achieved: max = 21.857 (critical 29.29 at DF=10)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Sample size (n=260) was adequate as it was greater than 50+8m, where m=10 (260>130). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. Also, all tolerance values were greater than 0.1 and VIFs less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (21.857), and maximum Cook's distance was .097, indicating outliers, as it should be <0.05. As multivariate outliers were identified, multiple regression analyses were conducted with and without outliers, and the influence of these outliers was assessed according to the suggestion of Tabachnick and Fidell (2014). The analyses revealed no clear differences in the presence and absence of the outliers in the regression analyses. Therefore, the results are presented with keeping outliers. Normal probability plot and residual scatterplot indicated normality; linearity and homoscedasticity assumptions were met.

Two demographic variables and one professional characteristic identified in bivariate and correlation analyses, and five components of job resources and two components of personal

resources variables were entered into the model in four steps: Step I: age and nationality; Step II: experience in academia $_{(sqrt)}$; Step III: job autonomy, relationship with supervisor, relationship with colleagues, career development and support, and pay; Step IV: emotional intelligence SSEIT$_{(\text{reflected sqrt})}$ and self-efficacy (GSE) $_{(\text{reflected sqrt})}$. The DV was $\log_{10}$ transformed and reflected. As shown in Table 6.35, age alone explained 12.3% of the variation in the DV (work engagement), while experience in academia did not lead to any increase in the adjusted R-square. Pay added 7.2% of the variation, and relationships with colleague added 2.7%. Personal resources (emotional intelligence and self-efficacy) further added 11.2% of the variation in the DV. The final model thus explains 33.2% of the variation in the DV (work engagement) and is a statistically significant (model ANOVA $p<0.001$).

In the final model, taking into consideration that the DV (UWES) was log-transformed and reflected, each one year increase in age would increase the work engagement log10 score by 0.005 points. Also, each one score points of pay adds 0.001 point to this score. Moreover, since the SSEIT and GSE scores were reflected and square-rooted, each square-root point of them adds 0.019 and 0.045 respectively to the $\log_{10}$ work engagement score.

Table 6.35: Hierarchal Stepwise Regression Analysis: Dependent Variable: Work Engagement (UWES, reflected, Log10) (positive arm)

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	.607	.046		13.256	.000	.517	.697			
	Age	-.007	.001	-.356	-6.108	.000	-.009	-.004	.127	.123	<0.001
2	Constant	.607	.046		13.232	.000	.517	.697			
	Age	-.006	.002	-.333	-4.088	.000	-.009	-.003			
	Exp in academia (SQRT)	-.005	.012	-.034	-.414	.679	-.030	.019	.127	.121	<0.001
3	Constant	.718	.049		14.513	.000	.621	.816			
	Age	-.006	.001	-.336	-4.305	.000	-.009	-.003			
	Exp in academia (SQRT)	-.003	.012	-.019	-.242	.809	-.026	.021			
	Pay	-.002	.000	-.274	-4.891	.000	-.003	-.001	.202	.193	<0.001
4	Constant	.829	.060		13.840	.000	.711	.947			
	Age	-.007	.001	-.352	-4.585	.000	-.009	-.004			
	Exp in academia (SQRT)	-.001	.012	-.008	-.108	.914	-.024	.022			
	Pay	-.002	.000	-.259	-4.692	.000	-.003	-.001			
	Relations (colleagues)	-.002	.001	-.175	-3.166	.002	-.003	-.001	.232	.220	<0.001
5 Final model	Constant	.437	.081		5.388	.000	.277	.596			
	Age	-.005	.001	-.272	-3.740	.000	-.008	-.002			
	Exp. in academia (SQRT)	-.001	.011	-.008	-.108	.914	-.022	.020			
	Pay	-.001	.000	-.206	-3.985	.000	-.002	-.001			
	Relations (colleagues)	-.001	.000	-.057	-1.043	.298	-.001	.000			
	SSEIT (reflected, SQRT)	.019	.006	.179	2.959	.003	.006	.031			
	GSE (reflected, SQRT)	.045	.011	.249	4.030	.000	.023	.067	.347	.332	<0.001

Regression 2: Prediction of commitment as dependent variables (positive arm of JDR model)

This regression analysis was performed to test the prediction ability of demographic and professional characteristics (age, nationality, and experience in academia), job resource components (job autonomy, relationship with supervisor, relationships with colleagues, career development and support, and pay) and personal resources (SSEIT and GSE) on commitment. Prior to conducting the regression analysis, all required assumptions were checked and achieved, as suggested by Tabachnick and Fidell (2014) (see Table 6.36).

Table 6.36: The Assumption of the Regression 2 (Prediction of Commitment) Positive Arm

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 260 >50+8x10 , 260>130 • Sample size was adequate to conduct this Regression
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.696 • Achieved: min: 0.491 • Achieved: max: 2.038
• No auto-correlation	• Durbin Watson: around 2	• Achieved: DW = 1.925
• Normality	• Z test <3.29 (after transformations of experience in academia, SSEEIT, GSE) • Visual P-P plot/histogram	• Achieved • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables) • No outliers with high Cook and high leverage	• NOT Achieved: max = 0.073 • Achieved: max = 28.062 (critical 29.29 at DF=10)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Sample size (n=260) was adequate as it was greater than 50+8m, where m=10 (260>130). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. Also, the tolerance

values were all greater than 0.1, and VIFs were all less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (28.062), and maximum Cook's distance was.073; it should be <0.05. Therefore, as there were multivariate outliers, multiple regression analyses were conducted with and without the outliers and the influence of outliers was assessed according to the suggestion of Tabachnick and Fidell (2014). Since no important influence of the presence or absence of the outliers on the regression analyses was revealed, the results are presented with keeping the outliers. Normal probability plot and residual scatterplot indicated normality, linearity and homoscedasticity assumptions were all met.

Two demographic variables and one professional characteristic were identified in the bivariate and correlation analyses, in addition to the five components of job resources and the two components of personal resources scales were entered into the model in four steps: Step I: age and nationality; Step II: experience in academia $_{(sqrt)}$; Step III: job autonomy, relationship with supervisor, relationships with colleagues, career development and support, and pay); Step IV: $SSEIT_{(\text{ reflected sqrt})}$ and $GSE_{(\text{ reflected sqrt})}$.

As shown in Table 6.37, nationality alone explained 1.6% of the variation in the DV (commitment), and experience in academia did not lead to a change in the adjusted R-square. The pay further added 31.5% of the variation in commitment score, career added 13.0%, and the relationships with colleagues added 1.3%. Meanwhile, the emotional intelligence and self-efficacy added almost nothing to the variance. The final model explains 47.5% of the variation in the DV (commitment), with no significant effect of the personal resources. The final model is a statistically significant (model ANOVA $p<0.001$).

In the final model, each one score point in pay increases the commitment score by 0.309 points, in career development and support by 0.314 points, and in relations with colleagues by 0.109.

Table 6.37: Hierarchal Stepwise Regression Analysis: Dependent Variable: Commitment (QEEW2) (Positive Arm of JDR Model)

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	67.589	1.453		46.527	.000	64.729	70.450			
	Nation-Saudi	-5.127	2.223	-.142	-2.306	.022	-9.505	-.749	.020	.016	0.022
2	Constant	63.251	4.905		12.895	.000	53.592	72.911			
	Nation-Saudi	-3.967	2.553	-.110	-1.554	.121	-8.994	1.060			
	Years in academia (SQRT)	1.101	1.189	.066	.926	.355	-1.240	3.442	.024	.016	0.047
3	Constant	32.401	4.918		6.589	.000	22.717	42.086			
	Nation-Saudi	.511	2.143	.014	.238	.812	-3.711	4.732			
	Exp in academia (SQRT)	1.676	.982	.100	1.707	.089	-.257	3.609			
	Pay	.433	.039	.572	11.026	.000	.356	.510	.339	.331	<0.001
4	Constant	18.903	4.733		3.994	.000	9.582	28.224			
	Nation-Saudi	-.635	1.929	-.018	-.329	.742	-4.434	3.165			
	Exp in academia (SQRT)	1.009	.885	.060	1.140	.255	-.734	2.752			
	Pay	.317	.038	.419	8.309	.000	.242	.392			
	Career develop & support	.343	.043	.393	7.906	.000	.258	.428	.469	.461	<0.001
5 Final model	Constant	19.386	7.307		2.653	.008	4.994	33.778			
	Nation-Saudi	-1.425	2.000	-.040	-.713	.477	-5.364	2.513			
	Years in academia (SQRT)	.842	.876	.050	.961	.337	-.883	2.568			
	Pay	.309	.038	.409	8.176	.000	.235	.384			
	Career develop & support	.314	.044	.359	7.154	.000	.228	.400			
	Relations (colleagues)	.109	.050	.108	2.182	.030	.011	.206			
	SSEEIT (reflected, SQRT)	-.912	.616	-.080	-1.480	.140	-2.125	.302			
	GSE (reflected, SQRT)	.278	1.097	.014	.253	.800	-1.883	2.439	.489	.475	<0.001

6.6.3 Interactions Effects

First interaction: The possible moderation influence of personal resources on the relation between job demand and stress outcomes (Burnout [EX-CY-PE], mental wellbeing, and job satisfaction) was tested. In order to explore the buffering effect of personal resources, multiple linear regressions with moderation was carried out. The moderation model tests whether the prediction of a dependent variable, Y, from an independent variable, X, differs across levels of a third variable, Z (Fairchild & MacKinnon, 2009). A total job demand score was calculated by simple summation of the totals of its subscales. The reliability of the summed scale was verified using the stratified reliability approach (Chakrabartty, 2020). The results are presented in the following tables and figures.

1- Moderation influence of the personal resources on the relation between job demand and burnout (MBI-EX) as a dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderators (SSEIT and GSE)

Step Three: interaction factors (each potential moderator * total job demand)

As illustrated in Table 6.38, the interaction between job demand and GSE added 0.044 to r-square, and this was statistically significant ($p<0.001$). Moreover, the beta coefficient of this interaction was statistically significant ($p<0.001$). These indicate that GSE is a moderator of the relation between job demand and burnout (MBI-EX).

Table 6.38: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Burnout (MBI-EX)

Dependent: MBI-EX Score

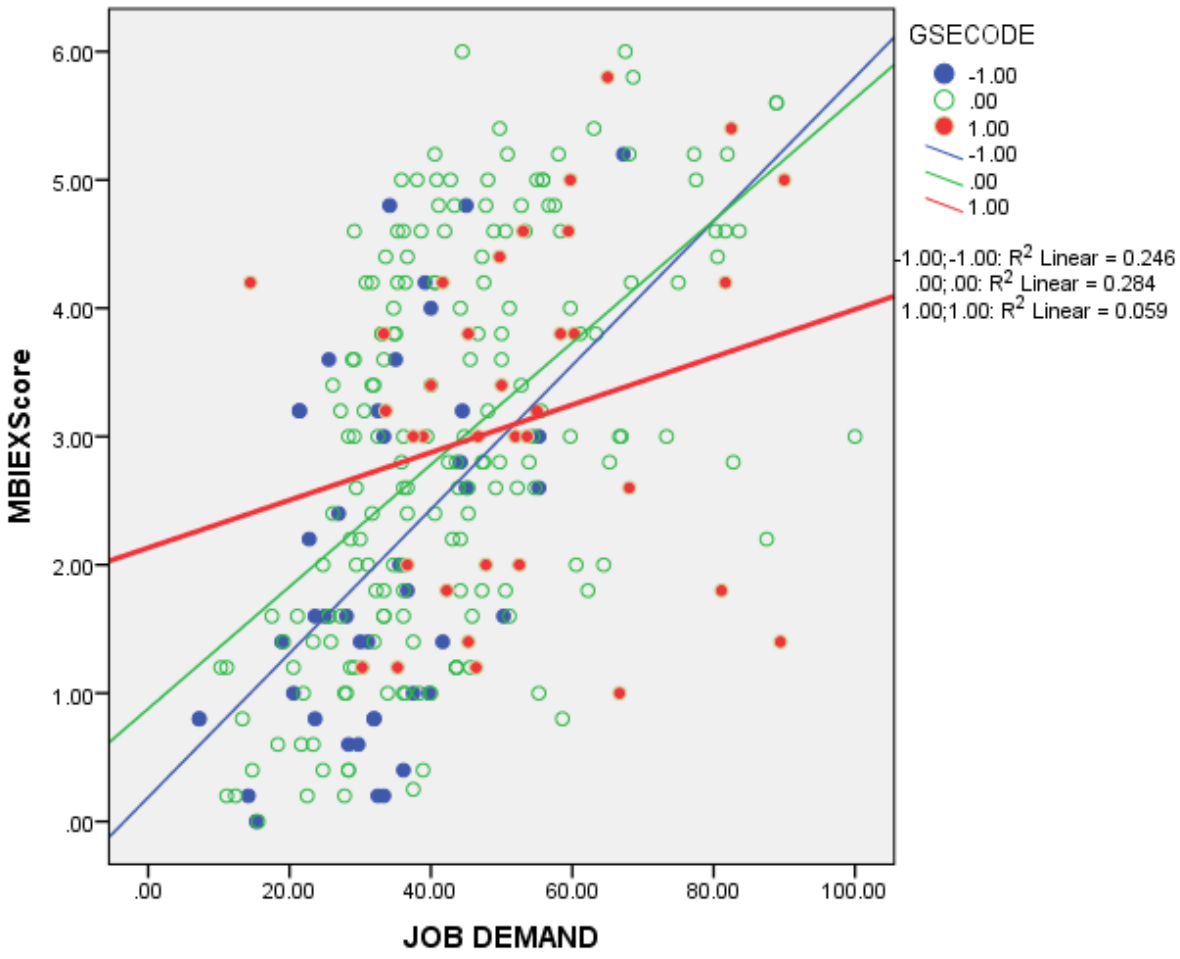
Model	R^2	Adjusted R^2	SE	R^2 change	F Change	F Change (p)	Model F	Model p
1-Demand	0.268	0.265	1.312	0.268	94.343	0.000	94.343	0.000
2-Demand + interaction 1	0.311	0.306	1.275	0.044	16.251	0.000	58.085	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	2.908	0.083		0.000	2.744	3.072
Demand (total, centred)	0.050	0.005	0.564	0.000	0.040	0.059
Interaction 1: Demand*GSE	-0.019	0.005	-0.214	0.000	-0.029	-0.010

Excluded Variables: SSEEIT, GSE, Interaction-2: Demand*SSEEIT

As Figure 6.9 illustrates, the slope of the high (red) category of GSE (>mean+1SD) is clearly less in comparison with the slopes of the middle (mean±1SD), and lower (<mean+1SD) categories of GSE. Thus, GSE buffers the effect of job demand on burnout (MBI-EX). The effect is more prominent at job demand scores of 50 or higher.



GSECODE: (-1) <mean-1 SD, (+1) >=mean±1SD, (0) mean±1 SD

Figure 6.9: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Burnout (MBI-EX)

2- Moderation influence of the personal resources on the relation between job demand and burnout (MBI-CY) as a dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderators (SSEIT and GSE)

Step Three: interaction factors (each potential moderator * total job demand)

Table 6.39 indicates that the interactions between job demand and each of the GSE and SSEIT added nothing to r-square. Additionally, their beta coefficient was not statistically significant, and thus, was excluded from the model. These indicate that neither GSE nor SSEIT are moderators of the relation between job demand and burnout (MBI-CY).

Table 6.39: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Burnout (MBI-CY)

Dependent: MBI-CY Score

Model	R^2	Adjusted R^2	SE	R^2 change	F Change	F Change (p)	Model F	Model p
1-Demand	0.183	0.180	1.273	0.183	57.931	0.000	57.931	0.000
2-Demand + SSEIT	0.204	0.198	1.260	0.021	6.690	0.000	32.949	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	2.489	0.078		31.863	0.000	2.335
Demand	0.031	0.005	0.380	6.461	0.000	0.021
SSEIT	0.137	0.053	0.152	2.587	0.010	0.033

Excluded Variables: GSE, Interaction-1: Demand*GSE, Interaction-2: Demand*SSEIT

3- Moderation influence of the personal resources on the relation between job demand and burnout (MBI-PE-Negative) as a dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderators (SSEIT and GSE)

Step Three: interaction factors (each potential moderator * total job demand)

As Table 6.40 demonstrates, the interaction between job demand and GSE added 0.016 to the r-square in the fourth model, and this was statistically significant (p=0.018). Additionally, its beta coefficient was statistically significant (p=0.018). These indicate that GSE is a moderator of the relation between job demand and burnout (MBI-PE-Neg).

Table 6.40: Moderator Effect of Personal Resources on the Relation between total Job Demands and Burnout (MBI-PE-Neg)

Dependent: MBI-PE-NEG-Score

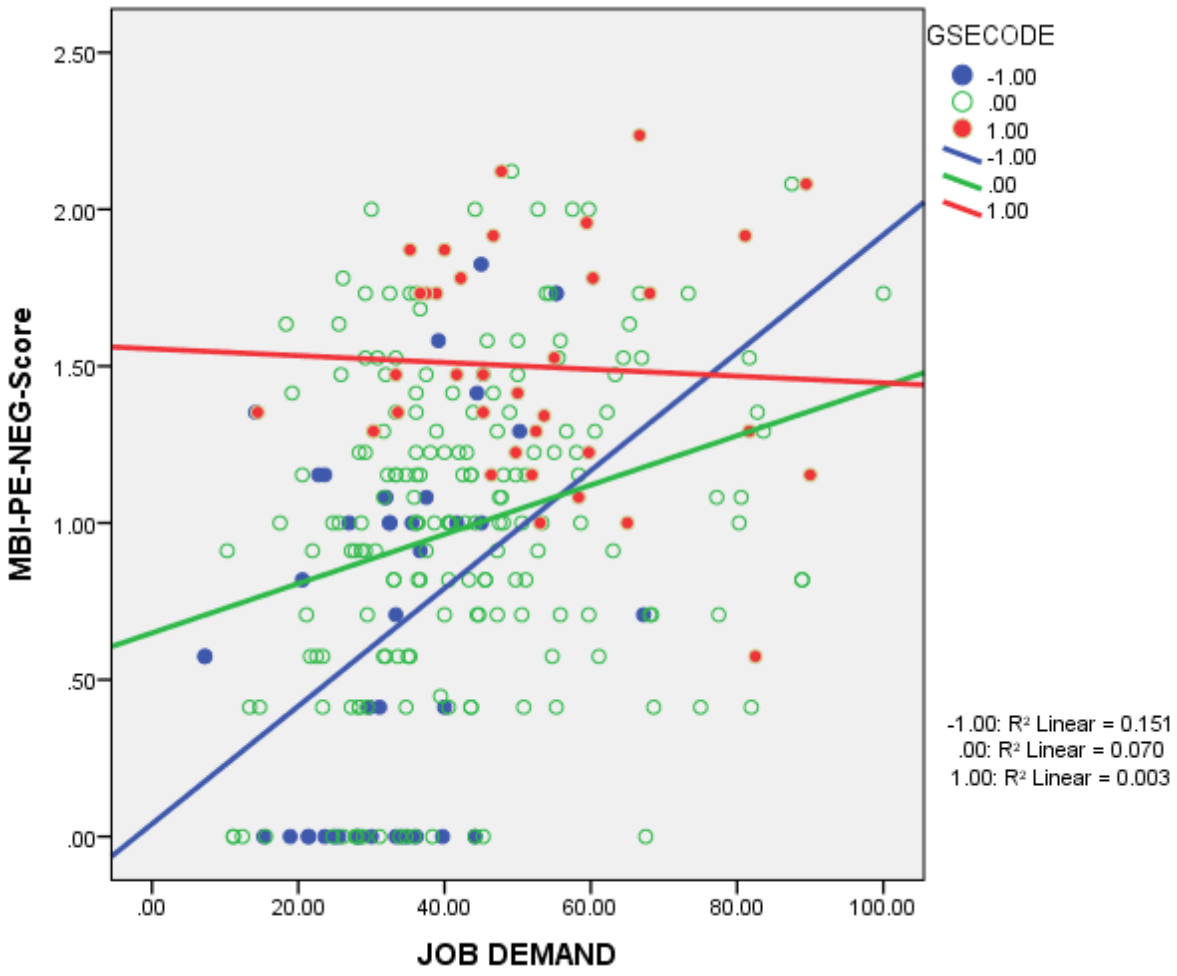
Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.113	0.109	0.530	0.113	32.724	0.000	32.724	0.000
2-Demand+GSE	0.236	0.230	0.493	0.123	41.334	0.000	39.587	0.000
3-Demand+GSE+SSEIT	0.256	0.247	0.487	0.020	6.899	0.009	29.297	0.000
4-Demand+GSE+SSEIT+ interaction 1	0.272	0.260	0.483	0.016	5.714	0.018	23.805	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	1.028	0.032	0.000	0.000	0.965	1.090
Demand	0.007	0.002	0.210	0.001	0.003	0.011
GSE	0.195	0.040	0.314	0.000	0.117	0.273
SSEEIT	0.049	0.023	0.137	0.034	0.004	0.094
Interaction 1: Demand*GSE	-0.004	0.002	-0.133	0.018	-0.008	-0.001

Excluded Variables: Interaction-2: Demand*SSEIT

As displayed in Figure 6.10, the slope of the high (red) category of GSE (>mean+1SD) indicates an inverse relationship between total job demand and burnout (MBI-PE-Neg). Thus, a high GSE score could reverse the negative effect of job demand on this burnout score. Conversely, the slopes of the middle (mean±1SD), and lower (<mean+1SD) categories of GSE indicate a positive relationship between job demand and MBI-PE-Neg score. Thus, GSE could buffer the effect of job demand on burnout (MBI-PE).



GSECODE: (-1) <mean-1 SD, (+1) >=mean±1SD, (0) mean±1 SD

Figure 6.10: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Burnout (MBI-PE-Neg)

4- Moderation influence of the personal resources to the relation between job demand and mental wellbeing (WEMWBS) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderators (SSEIT and GSE)

Step Three: interaction factors (each potential moderator * total job demand

Table 6.41 shows that the interactions between job demand and each of the GSE and SSEIT did not add significantly to r-square. Moreover, their beta coefficients were not statistically significant, and thus, they were excluded from the model. These indicate that neither GSE nor SSEIT are moderators of the relation between job demand and wellbeing.

Table 6.41: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Wellbeing (WEMWBS)

Dependent: WEMWBS-Score

Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.113	0.110	1.233	0.113	32.264	0.000	0.113	0.110
2-Demand+SSEIT	0.347	0.341	1.060	0.234	90.069	0.000	0.347	0.341
3-Demand+SSEIT+GSE	0.387	0.379	1.030	0.040	16.322	0.000	0.387	0.379

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	3.537	0.065	0.000	0.000	3.410	3.664
Demand	0.012	0.004	0.153	0.004	0.004	0.020
SSEIT	0.346	0.051	0.396	0.000	0.247	0.446
GSE	0.351	0.087	0.236	0.000	0.180	0.523

Excluded Variables: Interaction-1: Demand*GSE, Interaction 2: Demand*SSEIT

5- Moderation influence of the personal resources on the relation between job demand and job satisfaction (JDI) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderators (SSEIT and GSE)

Step Three: interaction factors (each potential moderator * total job demand)

Table 6.42 shows that the interaction between job demand and SSEEIT added 0.081 to the r-square in the second model, and this was statistically significant ($p<0.001$). Additionally, its beta

coefficient was statistically significant ($p<0.001$). These indicate that emotional intelligence SSEIT is a moderator of the relation between job demand and job satisfaction JDI.

Table 6.42: Moderator Effect of Personal Resources on the Relation between Total Job Demands and Job Satisfaction (JDI)

Dependent: JDI

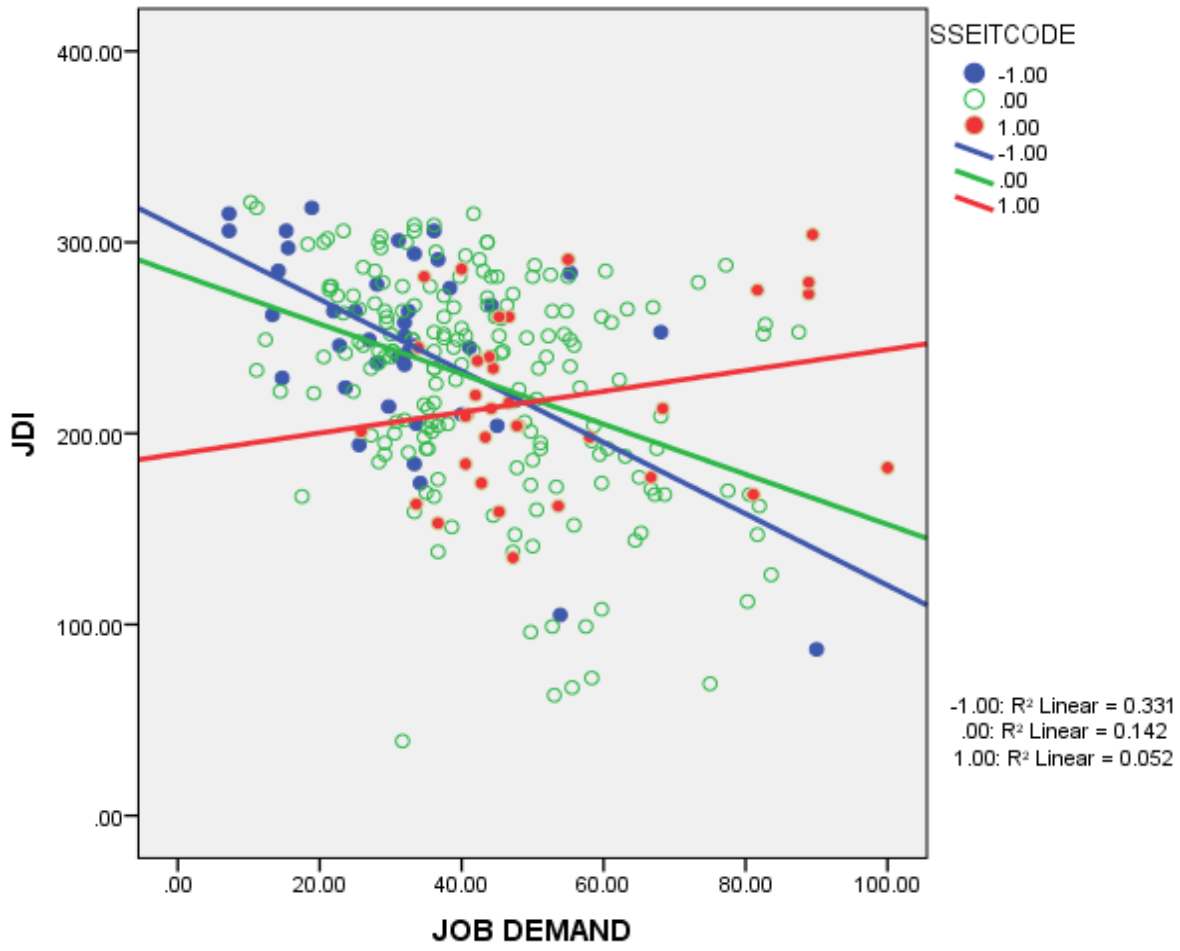
Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.126	0.122	51.555	0.126	37.029	0.000	37.029	0.000
2-Demand+Interaction-2	0.207	0.201	49.190	0.081	26.405	0.000	33.540	0.000

Coefficients

Final model	Unstandardised		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	224.521	3.175		0.000	218.269	230.773
Demand (total, centred)	-1.196	0.176	-0.379	0.000	-1.542	-0.849
Interaction 2: Demand*SSEIT	0.521	0.101	0.286	0.000	0.321	0.721

Excluded Variables: SSEIT, GSE, Interaction-1: Demand*GSE

Figure 6.11 demonstrates that the slope of the high (red) category of GSE (>mean+1SD) reflects a direct relationship between total job demand and JDI. Thus, a high SSEIT score could reverse the negative effect of job demand on the job satisfaction score. On the other hand, the slopes of the middle (mean±1SD), and lower (<mean+1SD) categories of SSEIT indicate an inverse relation to total job demand and JDI scores, thus the negative effect of a high job demand on job satisfaction is higher when SSEIT is lower. Thus, SSEIT buffers the effect of job demand on job satisfaction, and the effect is more evident at job demand scores of 50 or higher.



SSEEITCODE: (-1) <mean-1 SD, (+1) >=mean±1SD, (0) mean±1 SD

Figure 6.11: Moderator Effect of Personal Resources on the Relation between Total Job Demands. Job Satisfaction (JDI)

Second interaction: the influence of the job resources (potential moderator) on the relation between job demand and stress outcomes

Second interaction: The influence of the job resources on the relation between the job demand and stress outcomes was tested by moderation analysis. It was hypothesized that job resources moderate the relationship between job demands and stress outcomes (Burnout [MBI-EX-CY-PE], mental wellbeing, job satisfaction). In order to explore the buffering effect of job resources, MLRs with moderation were carried out. A total job resources score was calculated by simple summation of the totals of its subscales. The reliability of the summed scale was verified

using the stratified reliability approach (Chakrabartty, 2020). The results are presented in the following tables and figures.

1- Moderation influence of the job resources on the relation between job demand and burnout (MBI-EX) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderator (total job resources)

Step Three: interaction factor (potential moderator * total job demand)

Table 6.43 indicates that the interaction between job demand and job resources added nothing of significance to r-square. Additionally, its beta coefficient was not statistically significant, and thus it was excluded from the model. This shows that job resources do not moderate the relation between job demand and burnout (MBI-EX).

Table 6.43: Moderator Effect of Job Resources on the Relation between Total Job Demands and Burnout (MBI-EX)

Dependent: MBI-EX Score

Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.268	0.265	1.312	0.268	94.343	0.000	94.343	0.000
2-Demand+Job resources	0.362	0.357	1.227	0.094	38.037	0.000	72.962	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	2.803	0.076		0.000	2.653	2.952
Demand	0.036	0.005	0.412	0.000	0.027	0.045
Job resources	-0.038	0.006	-0.325	0.000	-0.050	-0.026

Excluded Variables: Interaction: Demand*Job resources

2- Moderation Influence of the Job Resources on the Relation between Job Demand and Burnout (MBI-CY) as Dependent Variable

Step One: independent factor (total job demand)

Step Two: potential moderator (total job resources)

Step Three: interaction factor (potential moderator * total job demand)

Similarly, Table 6.44 shows that job resources do not moderate the relation between job demand and burnout (MBI-CY). The interaction between job demand and job resources added nothing to r-square, and its beta coefficient was not statistically significant, and thus, it was excluded from the model.

Table 6.44: Moderator Effect of Job Resources on the Relation between Total Job Demands and Burnout (MBI-CY)

Dependent: MBI-CY Score

Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.183	0.180	1.273	0.183	57.931	0.000	57.931	0.000
2-Demand+Job resources	0.308	0.303	1.174	0.125	46.369	0.000	57.243	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	2.489	0.073		0.000	2.346	2.632
Demand	0.025	0.004	0.307	0.000	0.016	0.033
Job resources	-0.040	0.006	-0.374	0.000	-0.051	-0.028

Excluded Variables: Interaction: Demand*Job resources

3- Moderation influence of the job resources to the relation between job demand and burnout (MBI-PE-Neg) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderator (total job resources)

Step Three: interaction factor (potential moderator * total job demand)

As illustrated in Table 6.45, the interaction between job demand and job resources added 0.018 to the r-square in the third model, and this was statistically significant (p=0.014). Additionally, its beta coefficient was statistically significant (p=0.014). These indicate that job resources are moderators of the relation between job demand and burnout (MBI-PE-Neg).

Table 6.45: Moderator Effect of Job Resources on the Relation between Total Job Demands and Burnout (MBI-PE-Neg)

Dependent: MBI-PE-NEG-Score

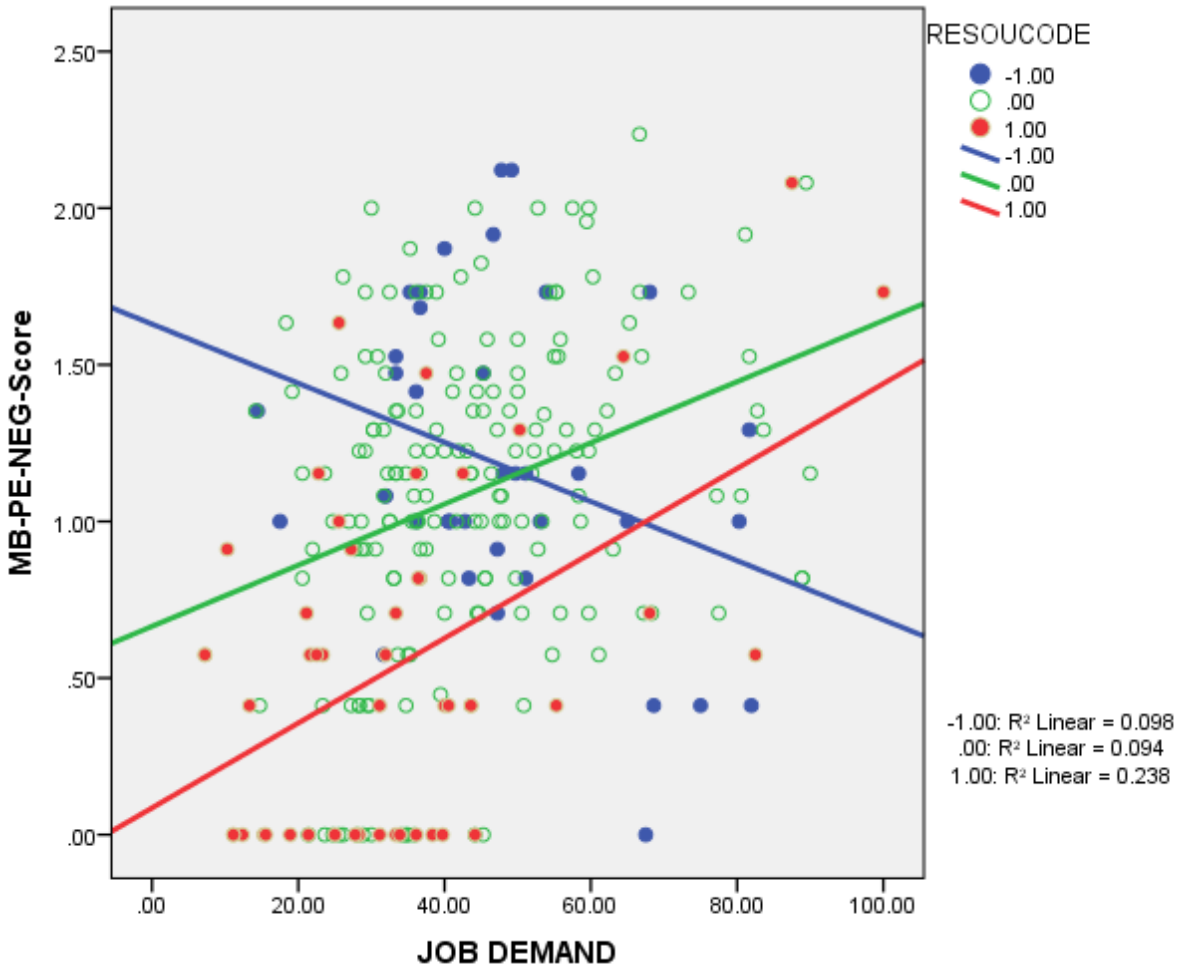
Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.095	0.092	1.267	0.095	27.154	0.000	27.154	0.000
2-Demand+Job resources	0.222	0.216	1.177	0.127	42.042	0.000	36.758	0.000
3-Demand+job resources +interaction	0.241	0.232	1.165	0.018	6.180	0.014	27.059	0.000

Coefficients

Final model	Unstandardised		Standardised Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	3.538	0.075	0.000	0.000	3.390	3.687
Demand	0.013	0.004	0.165	0.005	0.004	0.021
Job resources	-0.037	0.006	-0.364	0.000	-0.048	-0.025
Interaction: Demand*Job resources	0.001	0.000	0.138	0.014	0.000	0.001

As displayed in Figure 6.12, the slope of the low (blue) category of job resources (<mean+1SD) indicates an inverse relationship between total job demand and burnout (MBI-PE-Neg). Hence, a low job resources score could reverse the negative effect of job demand on this burnout score. Conversely, the slopes of the middle (mean±1SD), and upper (>mean+1SD) categories of job resources indicate a positive relationship between job demand and MBI-PE-Neg

score. Thus, job resources have an interactive or moderator effect on job demand on burnout (MBI-PE).



RESOUCODE: Job resources (-1) <mean-1 SD, (+1) >=mean±1SD, (0) mean±1 SD

Figure 6.12: Moderator Effect of Job Resources on the Relation between Total Job Demands and Burnout (MBI-PE-Neg)

4- Moderation influence of the job resources on the relation between job demands and mental wellbeing (WEMWBS) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderator (total job resources)

Step Three: interaction factor (potential moderator * total job demand)

Table 6.46 shows that the interaction between job demand and job resources added 0.012 to the r-square in the third model, and this was statistically significant (p=0.046). Additionally, its beta coefficient was statistically significant (p=0.046). These indicate that job resources are a moderator of the relation between job demand and wellbeing (WEMWBS).

Table 6.46 Moderator Effect of Job Resources on the Relation between Total Job Demands and Wellbeing (WEMWBS)

Dependent: WEMWBS-Score (reflected, sqrt)

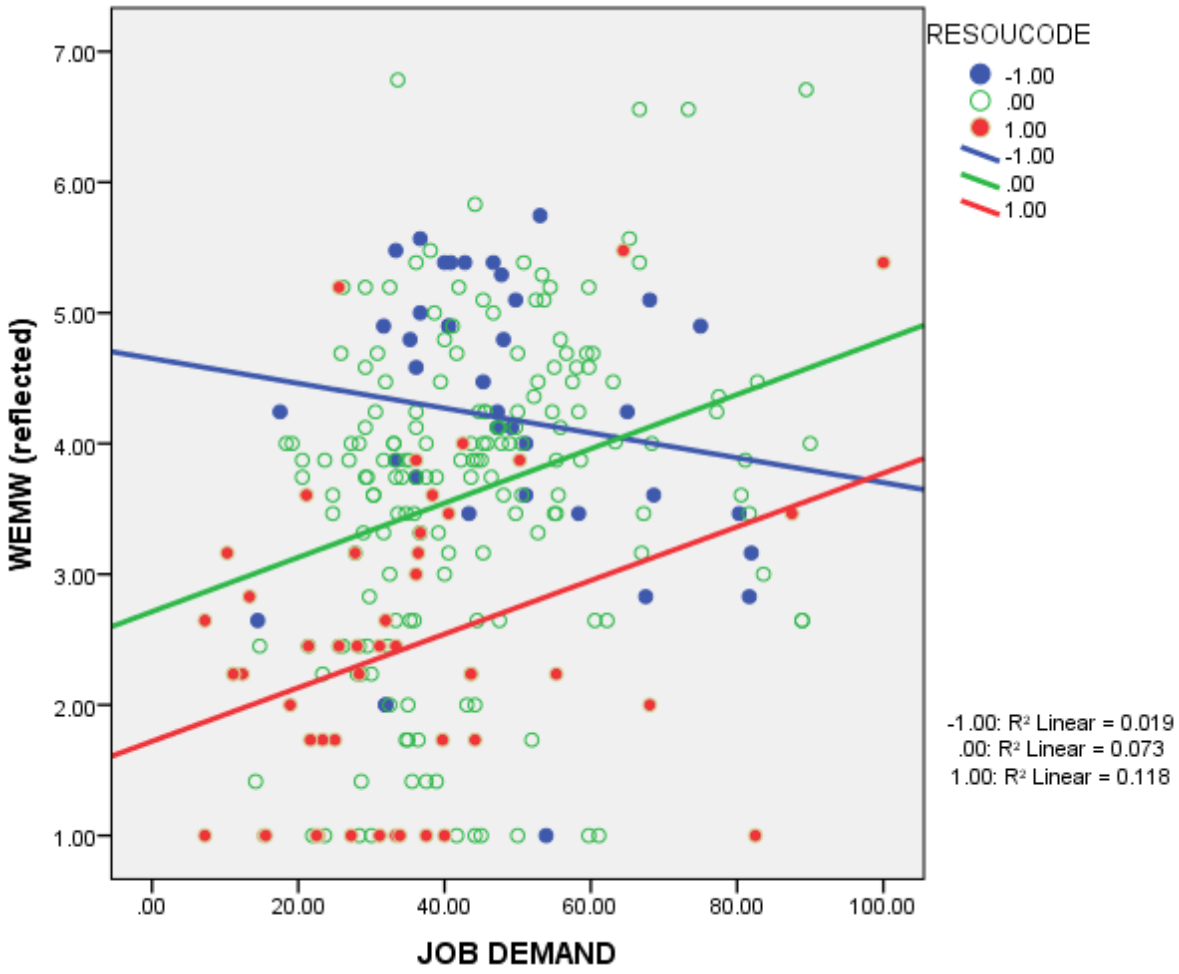
Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.103	0.100	1.245	0.103	29.330	0.000	29.330	0.000
2-Demand+Job resources	0.240	0.234	1.149	0.137	45.716	0.000	40.094	0.000
3-Demand+Job resources+ interaction	0.252	0.243	1.142	0.012	4.017	0.046	28.386	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	3.538	0.075	0.000	0.000	3.390	3.685
Demand	0.013	0.005	0.173	0.003	0.005	0.022
Job resources	-0.037	0.006	-0.374	0.000	-0.049	-0.026
Interaction: Demand*Job resources	0.001	0.000	0.113	0.046	0.000	0.001

Figure 6.13 demonstrates that the slope of the high (red: > mean+1SD) and middle (green: mean ±SD) categories of job resources are both at lower levels of WEMWBS. Taking into consideration that the WEMWBS score was reflected, the findings indicate that higher job resources scores are associated with higher wellbeing scores at various levels of job demand. However, at very high levels of job demands (intersection of the red and blue lines), the buffering

effect of job resources disappeared. Hence, job resources are a moderator of the effect of job demand on wellbeing.



RESOUCODE: Job resources (-1) <mean-1 SD, (+1) >=mean±1SD, (0) mean±1 SD

Figure 6.13: Moderator Effect of Job Resources on the Relation between Total Job Demands and Wellbeing (WEMWBS)

5- Moderation influence of the job resources on the relation between job demand and job satisfaction (JDI) as dependent variable

Step One: independent factor (total job demand)

Step Two: potential moderator (total job resources)

Step Three: interaction factor (potential moderator * total job demand)

Table 6.47 demonstrates that the interaction between job demand and job resources led to no statistically significant change in the r-square value, and its beta coefficient was not statistically significant. Hence, it was excluded from the final regression model. The result indicates that job resources are not a moderator of the relation between job demand and JDI.

Table 6.47: Moderator Effect of Job Resources on the Relation between Total Job Demands and Job Satisfaction (JDI)

Dependent: JDI

Model	R^2	Adjusted R^2	SE	R^2 change	F change	F change (p)	Model F	Model p
1-Demand	0.126	0.122	51.555	0.126	37.029	0.000	37.029	0.000
2-Demand+Job resources	0.348	0.343	44.616	0.222	87.488	0.000	68.465	0.000

Coefficients

Final model	Unstandardized		Standardized Beta	p-values	95% CI	
	B	Std. Error			Lower	Upper
Constant	229.038	2.767		0.000	223.590	234.487
Demand	-0.608	0.168	-0.192	0.000	-0.939	-0.276
Job resources	2.071	0.221	0.498	0.000	1.635	2.507

Excluded Variables: Interaction: Demand*Job resources

RQ4: *Which stress outcomes, mental wellbeing, job satisfaction and work engagement/work commitment are predictors or associate with the organisational outcome of Intention to Remain (ITR) in nursing faculties within this setting?*

This research question was addressed by using correlation analysis to determine the significant associations between the stress outcomes, work engagement/commitment variables and ITR as the final organizational outcome. Subsequently, multiple regression was conducted to identify which personal and/or professionals characteristics (age, gender, nationality, and experience in academia and in current institution), stress outcomes, work engagement/ commitment predict the ITR as outcome.

Firstly, the Spearman rank correlation test was performed to identify the significant relationship between: a- stress outcomes (burnout, mental wellbeing, and job satisfaction) and ITR (negative arm of JDR); and b- work engagement/commitment with ITR (positive arm of JDR model). The results of negative arm correlations revealed that people who experienced high level of stress were less likely to remain in their work, and people with a high level of MBI-PE, mental wellbeing and job satisfaction were more likely to remain in their work (see Table 6.48).

Table 6.48: Spearman rho Correlation between Stress Outcomes (MBI, WEMWBS, JDI) and ITR (as Negative Arm of JD-R Model)

Stress outcomes			ITR (high score=high intention to remain)
(Higher score=more burnout)	MBI – EX	r	-.212**
		p (2-tailed)	.001
	MBI-CY	r	-.164**
		p (2-tailed)	.008
(Higher score=less burnout)	MBI-PE	r	.301**
		p (2-tailed)	.000
Mental wellbeing (higher score=more mental wellbeing)	WEMWBS	r	.382**
		p (2-tailed)	.000
JIG and JDI (Higher score=higher satisfaction)	JDI - People Score	r	.259**
		p (2-tailed)	.000
	JIG	r	.296**
		p (2-tailed)	.000
	JDI-Work	r	.301**
		p (2-tailed)	.000
	JDI - Pay Score	r	.188**
		p (2-tailed)	.002
	JDI - Promotion Score	r	.207**
		p (2-tailed)	.001
	JDI - Supervision Score	r	.250**
		p (2-tailed)	.000

As for the results of positive arm correlations, it was found that the people who were more engaged and more committed to their work were more likely to remain in their work (see Table 6.49).

Table 6.49: Spearman rho Correlation between (Work Engagement, Commitment) within ITR (as Positive Arm of JD-R Model)

Work engagement and commitment			ITR (high score=high intention to remain)
Utrecht Work Engagement Scale (Higher score=more engagement	UWES-VI	r	.379**
		p (2-tailed)	.000
	UWES-DE	r	.261**
		p (2-tailed)	.000
	UWES-AB	r	.280**
		p (2-tailed)	.000
Commitment (Higher score= worse commitment	Commitment	r	-.412**
		p (2-tailed)	.000

6.6.4 Regression: Prediction of Intention to Remain (ITR) as Dependent Variable

Only one stepwise multiple regression analysis was performed to examine the prediction ability of the independent variable of stress outcomes (burnout, mental wellbeing, and job satisfaction), as well as work engagement and commitment in the presence of certain demographic and job professionals (age, gender, nationality, experience in academia, and experience in current institution) on the Intention to Remain (ITR) as a dependent variable.

To determine which independent variables (IV) should be included in each regression analysis, bivariate and correlation analyses were conducted between the independent and dependent variables (DV). The variables included were those which were significantly related at p=<0.15 (Tabachnick & Fidell, 2014) as presented in the Tables 6.50 and 6.51.

Table 6.50: Relations between IVs (Demographic and Professional Characteristics) and DV (ITR)

Independent variables		Dependent variable ITR R
Age	R	.099
	p (2-tailed)	.112
Gender (Mann- Whitney)	Z	~~-.106~~
	p (2-tailed)	~~.916~~
Nationality (Mann-Whitney)	Z	-1.693
	p (2-tailed)	.091
Experience in Academia	R	.165**
	p (2-tailed)	.008
Experience in current institution	R	~~.035~~
	p (2-tailed)	~~.578~~

✕ Will not include in regression (p value was not significant at 0.15).

Table 6.51: Relations between IVs (Stress Outcomes, Work Engagement, Commitment) and DVs (Intention to Remain)

Independent variables negative arm & positive arm			**Dependent variable ITR**
Burnout	MBI-EX	R	-.212**
		p (2-tailed)	.001
	MBI-CY	R	-.164**
		p (2-tailed)	.008
	MBI-PE	R	.301**
		p (2-tailed)	.000
Mental wellbeing	WEMWBS	R	.382**
		p (2-tailed)	.000
Job satisfaction	JDI - total Score	R	.354**
		p (2-tailed)	.000
Work engagement	UWES-total	R	.350**
		p (2-tailed)	.000
Commitment	Commitment (-ve)	R	-.412**
		p (2-tailed)	.000

✕ Will not include in regression (p value was not significant at 0.15)

The regression analysis was performed to test the prediction ability of demographic and professional characteristics (age, nationality, experience in academia), stress outcomes components (burnout [MBIEX-CY-PE], mental wellbeing, and job satisfaction), work engagement, and commitment, on the ITR. As previously mentioned, the commitment score was reversed in multivariate analysis so that a higher score indicates more commitment, for easy interpretation. Prior to conducting regression analysis, all required assumptions were checked and achieved, as suggested by Tabachnick and Fidell (2014) (see Table 6.52).

Table 6.52: The Assumptions of the Regression (Prediction of ITR)

Assumptions	Criteria	Fulfilment
• Sample adequacy	• Sample size adequacy at, N > 50+8m, m=numbers of IVs (Tabachnick & Fidell, 2014).	• 255 >50+8x10 , 255>130 • Sample size was adequate to conduct this Regression
• Linearity	• Scatterplots	• Achieved
• No multicollinearity	• No correlations >0.8 • Tolerance >0.1 • VIF: <10	• Achieved: max r=0.698 • Achieved: min: 0.587 • Achieved: max: 1.704
• No auto-correlation	• Durbin Watson: around 2	• Achieved: DW = 1.976
• Normality	• Z test <3.29 (after transformations of experience in academia, MBI-PE, WEMBS, JDI) • Visual P-P plot/histogram	• Achieved • Achieved
• Normality of residuals	• Residuals plot	• Achieved: no trend
• Outliers not influencing	• Cook's distance: <0.05 • Mahalanobis distance: <critical chi-square (df=number of independent variables) • No outliers with high Cook and high leverage	• Achieved: max = 0.027 • Achieved: max = 22.849 (critical 29.29 at DF=10)
• Homoscedasticity	• Residuals plot	• Achieved: No funnel shape

Sample size (n=255) was adequate as it was greater than 50+8m, where m=10 (255>130). The correlations among the independent variables (Pearson correlation) were less than 0.8, indicating that the assumption of the absence of multicollinearity was met. The tolerance values were all greater than 0.1 and the VIFs were all less than 10, further indicating no concerns about multicollinearity. The maximum Mahalanobis distance was less than the critical value (22.849), and maximum Cook's distance was >0.05, indicating the presence of multivariate outliers. Therefore, multiple regression analyses were conducted with and without these outliers, and their influence was assessed according to the suggestion of Tabachnick and Fidell (2014). As the influence of the outliers was evident on the regression analyses, the results are presented with removal of the outliers. Normal probability plot and residual scatterplot indicated normality, linearity, and homoscedasticity assumptions were all met.

Two demographic variables and one professional characteristic identified in bivariate and correlation analyses, in addition to three components of stress outcomes, work engagement, and commitment variables were entered into the model in four steps: Step I: age and nationality; Step

II: experience in academia$_{(sqrt)}$; Step III: burnout (MBI-EX, MBI-CY, MBI-PE), mental wellbeing $_{(reflected\ sqrt)}$, job satisfaction $_{(reflected\ sqrt)}$; Step IV: work engagement (reflected $_{log10}$), and commitment. As shown in Table 6.53, experience in academia added 2.5% of the variation in the in the ITR, and mental wellbeing further added 12.5%. Job satisfaction added 4.9% more, and commitment 7.5%. Lastly, engagement added 1.0% to the variation in ITR. The final model thus explains 28.3% of the variation in ITR score and is statistically significant (model ANOVA $p<0.001$).

As evident in the final model, each one point in the commitment score increases the intention to remain score by 0.124 points. As for the work engagement (which is reflected and log10 transformed), each one-point increases ITR by 0.06060 points (*since it was log10 transformed, its coefficient is divided by 100*).

Table 6.53: Hierarchal Stepwise Regression Analysis: Dependent Variable: Intention to Remain (ITR) as Organisational Outcome

Step		Beta Coefficients			t-test	p-value	Beta 95% CI		R^2	Adjusted R^2	Model F (p-value)
		Unstandardized	SE	Standardized			Lower	Upper			
1	Constant	35.238	1.427		24.699	.000	32.428	38.047			
	Years in academia (SQRT)	1.066	.390	.169	2.735	.007	.299	1.834	.029	.025	0.007
2	Constant	42.302	1.759		24.054	.000	38.839	45.766			
	Years in academia (SQRT)	.865	.366	.137	2.365	.019	.144	1.585			
	WEMWBS (reflected, (SQRT))	-1.845	.300	-.358	-6.157	.000	-2.435	-1.255	.156	.149	<0.001
3	Constant	46.256	1.969		23.488	.000	42.377	50.135			
	Years in academia (SQRT)	.756	.356	.120	2.124	.035	.055	1.458			
	WEMWBS (reflected, (SQRT)	-1.395	.312	-.271	-4.478	.000	-2.009	-.782			
	JDI (reflected, SQRT)	-.558	.139	-.244	-4.031	.000	-.831	-.286	.207	.198	<0.001
4	Constant	33.844	3.035		11.151	.000	27.866	39.821			
	Years in academia (SQRT)	.585	.341	.093	1.718	.087	-.086	1.256			
	WEMWBS (reflected, SQRT)	-.878	.313	-.170	-2.808	.005	-1.495	-.262			
	JDI (reflected, SQRT)	-.261	.144	-.114	-1.817	.070	-.544	.022			
	Commitment (QEEW2)	.130	.025	.340	5.200	.000	.081	.179	.284	.273	<0.001
5 Final Model	Constant	35.437	3.102		11.422	.000	29.326	41.547			
	Years in academia (SQRT)	.408	.348	.065	1.173	.242	-.277	1.093			
	WEMWBS (reflected, SQRT)	-.497	.357	-.096	-1.390	.166	-1.201	.207			
	JDI (reflected, (SQRT)	-.248	.143	-.108	-1.736	.084	-.529	.033			
	Commitment (QEEW2)	.124	.025	.324	4.955	.000	.075	.173			
	Engagement: reflected, Log10	-6.050	2.807	-.147	-2.156	.032	-11.579	-.522	.298	.283	<0.001

6.7 Strengths and Limitations

The study has many strengths; it has an adequate sample size that allowed multiple testing and multivariate analyses. It has a high response rate and minimal missing data. The sample is likely to be representative of all governmental nursing faculties in Saudi Arabia, both for male and female faculty members, but this could not be demonstrated. The multinational included both genders, and a range of age and experiences, thus adding to the variability of this study. The tools used in data collection are standardised with documented validity and reliability, covering and assessing all the study variables. The JD-R model worked well in guidance to the directions and interaction between the predictors and outcomes in two clear pathways.

On the other hand, the study has a number of limitations. Because generalisability could not be established, it must be recognised that it may not be. The second is that the design is cross-sectional, which means that causal relationships could not be determined. Future studies should consider a longitudinal design. The third is the self-reporting nature of the data collection tools, which could be associated with the known biases of self-reporting. Although good reliability was demonstrated, this study did not test validity of the questionnaires within its population. This could be performed as secondary data analyses.

6.8 Conclusion

This chapter has presented Phase Three of the cross-sectional survey, which is the main and largest phase. The cross-sectional design worked well in addressing all the research questions related to this phase. Participants were recruited from five Colleges of Nursing across Saudi Arabia by following specific workable recruitment strategies. Eight scales were used in this phase to test how independent and dependent variables explain intention to remain (ITR) within a Saudi context. The cross-sectional survey was conducted to identify the work environment factors that influence nursing faculties' wellbeing, engagement and ITR. Two hundred and sixty participants completed the survey’s questionnaires with a response rate of 84.74%. Sample size was adequate for the statistical analyses. The sample appears also to be a good reflection of the characteristics (age, gender, nationality, experience and roles) expected in a College of Nursing in a Saudi setting. The questionnaires and study variables appeared to be well understood by the participants. Most participants in the sample (around 75%) reported high emotional intelligence, high levels of

burnout, high/average mental wellbeing, and average job satisfaction, work engagement and ITR. The JD-R model captured the relevant variables and allowed operationalising of, and testing of, the relationships between and across these variables. Therefore, this model worked well within the context of this study.

Age, length of experience and nationality emerged as the key demographic predictors of burnout, job satisfaction and mental wellbeing. Older participants and those with more experience had less burnout, better mental well-being and were more engaged in their work. Females had more burnout-exhaustion, and less job satisfaction, while Saudi nationals had higher burnout, less job satisfaction and poorer mental wellbeing.

A number of the job demands emerged as predictors of stress outcomes: increased role conflict, high emotional load and pace, and amount of work predicted greater burnout, poorer mental wellbeing and less job satisfaction. Meanwhile, high mental workload predicted less burnout, and better mental wellbeing. A number of job and personal resources also emerged as predictors of work engagement and commitment. Good pay, career development, and better relationships with colleagues predicted greater commitment and more work engagement. In addition, high emotional intelligence and high self-efficacy, as personal resources, predicted more work engagement. The positive arm of the JD-R model (an increase in both commitment and work engagement) predicted a high intention to remain. Personal resources appear to have a buffering effect between job demands and stress outcomes, reducing their negative effect.

Finally, some results are worthy for further discussion in the next phase of the study, Phase Four. In this phase, a qualitative approach using focus groups will be utilised to interrogate the key results of Phase 3 and, in doing so, provide deeper understanding of these results.

Chapter Seven – Phase 4: Qualitative Study

7.1 Introduction and Background

This chapter presents Phase 4 of this mixed methods study, the qualitative study. As previously stated, the overarching aim of the study is to identify the personal and work environment characteristics associated with the organisational outcomes of intention to remain in higher education (HE) nursing facilities within Saudi Arabia. The aim of this qualitative phase is to build on the analysis of the cross-sectional phase by exploring the participants' responses to these results and, in doing so, gain greater understanding of the problem of intention to remain (ITR) in Saudi higher education. This qualitative phase will address RQ 5 and 6; that is:

RQ5: *How do nursing faculties interpret the results of the cross-sectional survey within the context of HEs in Saudi Arabia?*

RQ6: *What recommendations can be made about improving ITR in HEs in a Saudi context?*

This chapter begins by describing the design and methods utilised within this qualitative phase of the study. It then moves on to discuss related ethical and quality considerations. Finally, the chapter summarises the characteristics of the participants recruited to the related focus groups, provides a brief overview of the conduct of the focus groups, and then presents the qualitative findings including the discussion.

7.1.1 Aim of Qualitative Study

The aim of this qualitative study is to explain the results of the cross-sectional survey and explore the participants' responses to these results; and by doing so, to gain greater understanding of the problem of ITR and identify potential interventions to improve the work environment in Saudi HE.

7.1.2 Methodological Approach

This section describes: the study design, methods, study settings, sampling and recruitment, data generation, and data analysis, as well as ethical and quality considerations.

7.2 Design of Qualitative Study

As previously detailed in Chapter Four, a mixed methods design was employed within this study. In terms of timelines, Phase 4, the qualitative study, commenced after Phase 3, the cross-sectional survey had been completed and the results of it analysed. However, the entire study was planned in detail and ethical approvals sought prior to the commencement of any data generation. Qualitative research, when used along with quantitative methods, can help to interpret and better understand research issues or explore any influencing factors and the implications of quantitative data (Denzin & Lincoln, 2011).

7.2.1 Methods Utilised in the Qualitative Study

For this study, focus groups were identified as the most useful approach for generating data because they are regarded as an effective method to generate in-depth discussions and interpretations about how and why research problems are perceived the way they are (Merriam, 2009). Focus groups generate data through using the interactions within the group, and open-ended questions are asked to gain rich descriptions from the participants' perspectives about specific topics (Kamberelis & Dimitriadis, 2013). This method of data generation is particularly useful for exploring people's knowledge and experiences as it can reveal, through discussions with other participants, not only what people think but how they think and why they think in that way (Krueger & Casey, 2015).

Within this study, the focus groups will provide an in-depth understanding of the participants' perceptions in relation to the problem of ITR in Saudi HE. That is, through their discussions, participants may confirm and further explain the results, including important variables and relationships that were identified by the quantitative cross-sectional phase of the study. Additionally, participants may question the results and introduce new points for consideration in terms of what influenced the results within a Saudi setting. Within the focus groups, participants will also be encouraged, by bringing together the results of the quantitative phase with their own

views and those of the group, to explore potential interventions to improve the work environment in Saudi.

7.2.2 Rationale for Online Focus Groups

An online focus group is a well-established data collection method that allows the researcher to host a discussion between groups of participants through online platform technology; use of this method has become increasingly common among social researchers over the last few years (Kite & Phongsavan, 2017). An online focus group can be used to overcome the restrictions of undertaking face-to-face focus groups, as participants can be recruited from different geographic locations without the need for travelling, thereby potentially increasing the range of participants (Daniels et al., 2019). As well as potentially giving access to a broader range of research participants, Flynn et al. (2018) identifies a number of other benefits of online focus groups including: they are less costly to run than face-to-face focus groups; they may enable people to feel more relaxed and encourage them to speak freely and confidently about what is on their minds; and they may prove to be more time efficient for the participants and the moderator, as there is no need to travel to the discussion site.

While online focus groups offer many advantages, there are also disadvantages to consider. The major limitations of online focus groups reported in the literature are technological barriers, such as occasional slow connection speeds causing disruption, interruptions when other participants talk without muting their microphones, or when a participant is not familiar with using the online software and may find it difficult to fully participate (Abrams et al., 2015). In addition, Moore et al. (2015) caution that some participants are not comfortable with being recorded on video, so they connect by audio only; this might hinder the ability to assess their nonverbal communication and behavioural reactions. Evidence suggests that a smaller number of participants (eg. 3-8 participants) than may usually be invited to a focus group is appropriate for an online focus group, as it makes facilitation of the discussions more manageable (Poytner, 2010). Different software programs are available to conduct online focus groups, such as Skype, Zoom, Blackboard and Microsoft Teams. The selection of software that may be used must be evaluated in keeping with availability and applicability for the researcher and participants (Flynn et al., 2018).

In this study, online focus groups were used to overcome the Covid-19 pandemic restrictions and to protect the participants from spreading the disease by face-to-face contact (Kite & Phongsavan, 2017). This required a minor amendment in the study protocol, with requisite revisions being submitted for ethical approval, as the original intention had been to conduct face-to-face focus groups. The decision to move to online focus groups was essentially pragmatic, however, the researcher also benefitted from detailed discussions with fellow doctoral students and academic staff who were facing similar challenges. This helped to ensure a logical, evidence-based approach to data generation via online focus groups.

Following detailed consideration of the options for conducting online focus groups, the researcher decided to limit recruitment to up to 6 participants in each focus group. Microsoft Teams software was identified as the most suitable platform to use because it is secure and has the facility to record both audio and visual components. It also has the facility to allow the researcher to share the screen; to allow participants to raise a hand if they want to talk; can be downloaded freely and easily onto a desktop or a mobile device; and has no limited time of use (Daniels et al., 2019). In addition, the researcher was aware that Microsoft Team software was familiar to the potential participants as the majority of the faculty members use it for their online meetings and lectures, especially during the COVID-19 situation. Using the Microsoft Team software, the researcher knew that it would be easy to invite the participants via email and to send a link so all participants could just press the link to enter the meeting room (Daniels et al., 2019). To overcome the anticipated challenges of an online focus group (as outlined above), the researcher prepared instructions regarding these potential challenges and added solutions for each challenge; this was sent via email to each participant prior to the focus group discussions (Flynn et al., 2018) (see Appendix-25).

7.2.3 Study Settings

Four focus groups were conducted: two each in the Nursing College of Princess Noura University (PNU) and the Nursing College Imam Abdulrahman University (IAU); faculty members from both of these HEs took part in the cross-sectional phase of the study. These two colleges were chosen because they employ nurses from all academic ranks, from professors to demonstrators. The two focus groups from PNU included only females, as this HE has only female

staff. The other two focus groups from IAU included one group from the female site and another group from the male site. One advantage of moving to online focus groups within this study was that it enabled the female researcher to conduct a focus group with male participants; due to cultural restrictions, this would not have been possible in a face-to-face focus group. The settings for the focus groups were selected to exclude the workplace of the researcher to avoid the possibility that the participants may not express their honest and personal opinions regarding the topic, as they may be hesitant to express their thoughts, especially if they were concerned that their thoughts might not align with the views of the researcher (Jayasekara, 2012)

7.2.4 Sampling

Purposive sampling was adopted for the selection of participants because of its potential to seek out and recruit participants who are likely to include a broad range of perspectives and characteristics (Creswell & Clark, 2011). Within this study, purposive sampling was utilised in order to include participants from all the academic ranks in each setting, and to include participants of both genders; it was anticipated that this would facilitate access to a range of experiences and perspectives about the results of the quantitative phase and ITR more generally.

The decision was taken to divide the sample of participants into four focus groups according to their academic ranks as senior members of staff (including professors, associate professors, and assistant professors) and junior members of staff (lecturers and demonstrators); with a 'senior staff' and a 'junior staff' focus group being held in each of the two selected HEIs. It was anticipated that joining a focus group with other participants who came from a similar rank would create a comfortable atmosphere, encourage participants to express their opinions freely and increase motivation for people to attend. From the researcher's experience of working in Saudi HE, sometimes bringing senior and junior staff together to discuss a topic can be challenging; senior staff tend to dominate the discussion and junior staff may feel uncomfortable about sharing alternative opinions, particularly when they are from the same setting. Moreover, when the issue being discussed is a potentially sensitive one, it is recommended that the participants need be of the same sex, age, level, education and socio-economic background (Odimegwu, 2000).

7.2.5 Recruitment

The focus group participants were recruited from the population of participants who responded to the survey, and after the survey was completed; for pragmatic reasons, only participants who had taken part in the survey from two previously identified settings of the five settings of the survey were invited to participate. The same champions from the two settings of the survey were asked to assist in the focus group recruitment process, following the same strategies, because this approach had worked well for recruitment to the survey phase. The participants were recruited to include academic nursing faculty members who had graduated and had at least two years' experience in academia. These inclusion criteria were established to facilitate access to faculty members who had experience of working in an academic environment and who had, therefore, greater insights to offer into the challenges of working in HE and ITR (Odimegwu, 2000).

The following steps were used during recruitment of the focus group participants:

1- Two champions were identified from the two settings to facilitate access to potential participants.

2- The researcher sent copies of the participant information sheet (PIS) (see Appendix 26) and permission to contact slips (see Appendix 27), via email, to the two champions, highlighting to them that the focus groups would be conducted online.

3. The champions emailed the potential participants (faculty staff who met the eligibility criteria) inviting them to read the PIS and consider taking part in the study. If they wished to take part, potential participants were instructed to read and sign the permission to contact slip and then email the completed slip to the researcher within one week of receiving the invitation.

4. A week after distributing the invitations to potential participants, the researcher reviewed the number of completed permission to contact slips that she had received by email.

5. The researcher used the information on the completed slips to contact each of the potential participants and determine the most suitable times and dates for the online focus

groups, which was deemed to be the one that was mutually convenient for the majority of the potential participants. Each potential participant was allocated to one online focus group, depending on their academic rank and the setting in which they worked.

6. At least one week before the confirmed online focus group, the potential participants were emailed an informed consent form (see Appendix 28) to read and they were invited to complete it if they still wanted to take part in the study; the PIS was again included in this email in order to ensure each participant had easy access to information about the study. Participants were asked to sign the consent form electronically and email it back to the researcher, should they wish to proceed.

7. The researcher emailed the invitation link for attending the focus group to the willing participants, with written instructions about the conduct of the online session, and also providing instructions about how to join the session at the scheduled time and day.

7.2.6 Development of the Topic Guide

A topic guide consists of open-ended questions which are presented to the participants one at a time, in order to gain rich descriptions of the participants' perspectives, insights into specific topics, and the nature of their beliefs about these topics (Kamberelis & Dimitriadis, 2013). Additional probing questions or sub-questions may be utilised by the researcher to clarify what participants are saying and when the researcher would like participants to give more specific information or explore alternative perspectives (Creswell & Clark, 2007). To aid recall, the researcher may opt to share the questions in a visual format as well as presenting them orally as this visual aid will help participants to remember the questions and stimulate their thoughts about that specific topic (Tuttas, 2015).

Within this study, the topic guide was informed by the results of the cross-sectional survey, in terms of the factors which influenced the participants' ITR. The researcher shared each question, one-by-one, on the screen with the participants. The topic guide consisted of these six questions:

1-When asked what made them feel engaged with their work and committed to their organisation, participants reported that adequate pay, career development and good

relationships with colleagues were the most influential factors. Why do you think these were the most frequent responses?

2-We know that intention to remain is influenced by the stresses that faculty members experience in their working lives. Sometimes, however, when two people face the same pressures or demands, one copes better with the related stresses than the other. Why is that?

3-When exploring the demands of their jobs with participants, one of the things that surprised me was that faculty members who had to concentrate more on their work and had continuous thoughts about their work reported experiencing less burnout and better mental health. Can you help me to understand that?

4-Why do you think female faculty members reported greater exhaustion and less satisfaction in their work than male faculty members?

5-Why do you think Saudi nationals reported poorer mental health regarding their work than non-Saudi faculty members?

6-Do you have any recommendations about how we can improve the intention to remain in Saudi higher education?

7.2.7 Data Generation

At the start of the focus group sessions, before data generation began, the researcher planned to introduce herself and the research assistant, explaining their roles in the focus group process, and welcoming the participants. She would move on to reiterate information from the PIS about the study, and invite any questions. The researcher would also remind the participants about their right to withdraw or log out at any time without giving any reason, despite having given informed consent. The researcher would remind the participants that the session was being recorded; although participants would already be aware of this from reading the PIS, it was also considered important to remind participants at this stage to ensure their agreement and attending to their understanding in this way may increase trust between the participants and the researcher (Doody & Noonan, 2013). All focus group discussions were to be audio-taped using digital recorders as well as Microsoft Teams recordings (Jayasekara, 2012).

The focus groups were to be managed by two moderators: the researcher and a research assistant. Discussions were to be facilitated by the researcher, while the role of the research assistant was to attend to the participants' requirements and co-ordinate the order in which the participants spoke, based on raising their hands. When one participant was speaking, the others would be requested by research assistant to mute their microphones to ensure that the participants did not talk over each other. The research assistant would also check the recording processes and would be available to solve any technical problems during the sessions (Daniels et al., 2019). The selection of this research assistant was based on characteristics suggested by Stewart and Shamdasani (1990) – that is, someone one who had experience of moderating focus groups, had good communication and time management skills, and was familiar with the technology being utilised.

7.2.8 Piloting of Focus Group Method using Microsoft Teams

Prior to the focus groups, one pilot online focus group was conducted involving the researcher, the researcher assistant, two volunteer PhD students and two supervisors. The purpose of this pilot focus group was to evaluate the utility of the chosen software, evaluate the clarity of the topic guide questions, and practice co-moderating a focus group with the research assistant (Tuttas, 2015). One month prior the actual focus group, the researcher invited the volunteers via email to attend the pilot focus group; this email explained the purpose of the pilot focus group and gave details of the study via the PIS. Then after their agreement had been received via the email, the researcher conducted the pilot focus group following the same process as was planned for the actual focus groups – see section above 'Data generation'.

The findings from the pilot focus group indicated that the topic guide questions were well understood by the participants as none of the participants asked for any clarifications and their responses aligned with what was being asked. Furthermore, sharing the screen to show the participants the questions one-by-one was helpful as it appeared to enable them focus on what was being asked; none of the participants asked for the questions to be repeated because of the visual reminder (Hurworth, Clark, Martin & Thomsen, 2005). In addition, the piloting of the online focus group was helpful for the researcher and the research assistant to practice their roles and to familiarise themselves with conducting an online focus group using the Microsoft Teams facilities. No changes to the process were required as a result of the pilot.

7.2.9 Ethical Considerations

Ethical approval was obtained from the Ethical Committee (UREC) at University of Dundee (UOD) and subsequently the Institutional Review Board (IRB) from King Saud University (KSU). The main ethical considerations related to: confidentiality within the focus groups, anonymity in the reporting of the findings, issues of informed consent, and data management.

Participants were informed about their rights to withdraw from the study at any time without the requirement to present any rationale. The participant information sheet explained the study risks and benefits, as well as giving a description of the strategies undertaken to assure participant anonymity and confidentiality. This information is included in the PIS, which was sent individually to potential participants prior to taking part in the study. As previously detailed, these PIS were distributed via email by the recruited champions in each setting. Focus group participants cannot be given total guarantees of confidentiality because of the communal nature of data generation. Within this study, participants worked in the same HEI and therefore, also typically already knew each other. Thus, the participants might be hesitant about expressing opinions that they perceived might influence their career negatively. At the same time this might be useful for more interaction during the discussion of focus group because they know each other (Novak, 2014). Therefore, as well as highlighting the need for the focus group discussions to be kept confidential within the consent form, at the beginning of the focus group the researcher also reminded the participants to be respectful of each other's need for anonymity and to keep the discussions confidential.

When reporting the findings of this study, direct quotes will be used to illustrate what was said by the participants. If the data is not sufficiently anonymised, then it may be possible for the participants to be identified in the reports thereby breaching their anonymity and confidentiality. Ideally, anonymity is best achieved by not using participants' real names or the locations they live and work in, and limiting details about behaviour patterns or social status. As an alternative to sharing this level of detail about participant, as a means of contextualising their contributions, researchers are inclined to use limited descriptive information instead (Novak, 2014). In this study, the researcher gave the participants pseudonyms and contextualised direct quotes by referring to them as two group categories, as junior or senior staff members, and as male or female. Within this study, all the participants' names were changed to pseudonyms at the transcription stage and

all the personal information in the contact slips and consents were stored separately from the transcriptions. Only pseudonyms will be used to refer to the participants within any of the publications from this study.

The voluntary agreement of the participants in the focus groups was obtained via a signed informed consent form, via email, one week prior to taking part in the online focus groups. The personal data provided via the permission to contact slips were used only to contact the participants by phone to determine the date and time of the focus group sessions. Participants were informed in the focus group phase that there would be audio recordings via the PIS and also as written in the consent form. The participants were asked to check the audio recording agreement box on the consent form, and signed the consent form agreeing to the audio recording if that was acceptable to them. Notably, from the original 20 participants, two withdrew when the focus group started without any questions being asked. This had been accommodated for within the consent form, which stated that participants had the right to withdraw without having to give a reason or justification for doing that (Sim & Waterfield, 2019).

Electronic research data was stored and processed in a password protected computer known only to the researcher; all precautions against any malware attack or crashing of computers were taken with the latest updates of software, offering antivirus software. Hard copies of related documents were also stored safely so that no one else has access to them; that is, transcripts and backups of electronic data were stored in a strong safe under lock and key which was solely in the possession of the researcher.

7.2.10 Quality Considerations

A lot of research over the years has been aimed at offering guidance to qualitative researchers about improving or evaluating the quality of qualitative research. Seminal work by Lincoln and Guba (1985) suggests four criteria are utilised to assure the quality and trustworthiness of qualitative research: that is, credibility, transferability, dependability and confirmability.

7.2.10.1 Credibility

Credibility is about establishing the trustworthiness of the research (Thomas & Magilvy, 2011). Usually, researchers achieve credibility by applying techniques such as triangulation or

member-checking (Polit & Beck, 2004). Both these techniques aim to use of several data sources in qualitative research to build up a comprehensive understanding of study issue or phenomena (Patton, 1999). Within this study, the data were gathered from several sites from different universities across Saudi Arabia, including from people with different experiences, from various academic ranks via a cross-sectional study. Key results were then presented back to a broad range of participants via the focus groups with view to gaining a more complete understanding of ITR.

7.2.10.2 Transferability

Transferability means the ability of researchers to provide sufficient details about the research context and the underlying assumptions of their research so that the users of the research can determine whether it is sensible to utilise the findings within their own context (Thomas & Magilvy, 2011). In this study, the researcher planned in detail, and described in detail within this thesis, the methods, context and population and samples, as well as the procedures of data collection, data analysis and reporting the findings. This robust approach to presenting the study will be replicated in future publications.

7.2.10.3 Dependability

Dependability is about establishing that the findings are consistent and reliable. That is, the aim is to make sure that if another researcher was to work with the data, that they too would report similar descriptions and interpretations of the data. Whilst this is important in terms of establishing trustworthiness, it is also potentially problematic as it could be interpreted to mean that there is one ‘truth’ to be told which, of course, does not align with most qualitative researchers’ beliefs that there are multiple realities or truths (Thomas & Magilvy, 2011). Within this study, dependability was created by using a systematic approach throughout the whole study, in data collection and analysis and, at each step of the process, engaging in robust discussions with the supervisors of the researcher. This enabled the researcher to articulate how the descriptions and interpretations linked to what the participants had said, how they had said it and in what context.

7.2.10.4 Confirmability

Confirmability means that the researcher should be cautious about influencing the participants’ opinions and views during the focus group discussions because it is essential that the

data reflects what the participants believe (De Vos et al., 2005). Usually, researchers achieve confirmability by presenting an audit trail or by the researcher adopting a reflexive approach throughout the research process, and recording their thoughts, values and assumptions in a reflective diary (Haynes, 2014). Throughout this study, the researcher focused on achieving reflexivity by keeping notes in order to remain aware of avoiding including her own beliefs that might interfere with the findings of the study (Thomas & Magilvy, 2011). Reflexivity is discussed in more detail in the next section.

7.2.10.5 Reflexivity

"Reflexivity" means having an awareness of the influence that the researcher may have on the people or topic of research. A reflexive approach involves continually evaluating the researcher's involvement in the research process, systematically and critically, at each step, including data collection and analysis (Jones, 2011). Reflexive engagement during writing about the research also enhances the ongoing review of the relationship between the researcher, the research topic and the research participants, and is used primarily to remove researcher influence as a factor affecting the research outcomes so that the research attains greater credibility. This, in turn, improves the trustworthiness and quality of the research (Haynes, 2014; Probst, 2015).

Strategies to promote reflexivity suggested by Haynes (2014) are: the researcher writing down their assumptions about the topic of the research at the beginning of the research, and frequent visits to these notes as the research progresses to examine whether and how assumptions have changed over time; whether these changes in assumptions have changed the research questions, focus or findings; keeping a record of thoughts and feelings during the research process; keeping fieldwork notes of observations, interactions, incidents, conversations, emotions and responses; when listening to recordings, examining whether the presence of the researcher has affected the process; and discussing the responses of the participants and the processes with other researchers. Qualitative results can vary in interpretation and, therefore, it is essential for any researcher to be aware of their own perceptions and opinions that might influence the study findings (Carroll & Mesman, 2018).

In this study, reflexivity was achieved by the researcher maintaining the use of reflective notes during each stage of the research. During data collection in the focus group discussions, the

researcher maintained a neutral position when asking the questions by not engaging her personal responses and body language, or even showing a cultural bias that may have an impact on the discussions. In the analysis phase, the researcher was careful to not be selective in choosing themes that fitted in with the researcher's perceptions. Therefore, the researcher strictly applied the six systematic steps of Braun and Clarke, also going back to the data many times at each step. The researcher reviewed the transcriptions and emergent themes with her supervisors in order to be more accurate in identifying and defining the themes and sub-themes, as well as discussing the interpretations and recommendations in depth (Gerrish & Lacey, 2006).

7.3 Data Analysis

Conducting thematic analysis by following the Braun and Clarke (2006) steps is a widely used approach because the six-step process offers a structured and easily comprehensible way of producing a rigorous thematic analysis. Therefore, thematic analysis of this data was undertaken using the six steps laid out by Braun and Clarke (2006), see Table 7.1.

Table 7.1: The Six Steps of Braun and Clarke's Thematic Analysis (2006)

Phase	Description of the Process
1. Familiarisation with the data	Transcribing data, reading and re-reading the data, writing notes about initial thoughts or ideas about each transcription.
2. Generating initial codes	Coding from the data in a systematic fashion across the whole data set; collating data related to each code.
3. Searching for themes	Gathering codes into potential themes; collating all data relevant to each potential theme.
4. Reviewing themes	Verifying whether the themes fit in relation to the coded extracts and the entire data set; generating a thematic 'map' of the analysis (optional).
5. Defining themes	Continuing analysis to refine the specifics of each theme, creating clear definitions and names for each theme.
6. Producing the report or writing up	Compelling extracts; final analysis of selected extracts; relating the analysis back to the research questions and literature.

7.3.1 Step 1: Familiarisation with the Data

All four focus groups were recorded using a digital audio recorder (Sony IC-UX560F) and also by using the Microsoft Team recording feature. The researcher listened to the recordings immediately after each session to ensure that the recordings were clear. Transcription was conducted by the researcher herself and the close reading involved in doing that transcription enabled the researcher to become familiar with the content and scope of the data (Bird 2005). The recordings were transcribed verbatim, in the English language. The researcher cross-checked each transcription for accuracy against the audio recording, then read the transcripts and listened to each of the tapes several times to reach an overall understanding of the data (Smith & Firth, 2011).

The field notes taken by the researcher immediately after each focus group session offered further contextual details. For example, the field notes gathered personal reflections on how successful the focus group had been, what had worked well and what had been challenging; the field notes also brought together the researcher's initial impressions and observations about the data, relating this to the research questions where appropriate (Sullivan-Bolyai et al., 2005; Clarke & Braun, 2014).

7.3.2 Step 2: Coding

The initial coding is important in reducing the quantity of data into small, meaningful chunks. This is accomplished by reading each transcript in detail, line-by-line, and extracting and highlighting any meaningful text (Clarke & Braun, 2014). In this study, the initial coding was undertaken to highlight segments of data that appeared to be relevant to or captured something interesting about the research questions. This was done manually using Word versions of the transcripts and coding by 'highlighting' and 'commenting' within the document; this document was then easily shared with the supervisors. The researcher read over the transcripts in a systematic way, identifying codes in relation to each question in turn from the topic guide. The coding process was discussed in supervision so as to ensure that there was clarity about how each step was being undertaken. Initial codes were also discussed in terms of what they might encompass, as well as the researcher's impressions of initial patterns in the data.

7.3.3 Step 3: Searching for Themes

The next step, searching for themes, typically takes some time as it involves analytical decisions about what are significant and interesting patterns in the data in terms of answering the research questions (Braun & Clarke 2006). The initial broad codes are sorted into more specific potential themes and sub-themes, and other codes may be merged or discarded. Brian and Clarke (2006) suggest that using a mind map, or other visual representation, as well as brief descriptions of what the codes encompass, can be helpful at this stage to see how codes and themes fit together.

In this study, the codes were examined and some of them clearly fitted together into provisional themes and sub-themes. The codes were arranged into themes that seemed to address something specific about the research question. All the codes, themes and sub-themes were entered into columns in a table, along with direct quotes from the transcriptions. These tables were then used as the focus of supervision sessions to explore what was captured by a particular theme and to begin to identify patterns in the data, as well as anomalies.

7.3.4 Step 4: Reviewing Themes

Reviewing the themes can commence once all the provisional themes have been identified. In this step, some themes will become more apparent as main themes and others may be collapsed into other themes or become sub-themes. The criteria to fulfil for each theme are: the theme must make sense; the data must support the theme; the theme must not be all-encompassing; the themes should not overlap with each other; and the possibility of sub-themes within themes.

In this study, all the provisional themes were reviewed and modified as needed; this involved the researcher closely checking their relationship with the data from which the themes were derived and their relationship to the context of the entire data set. This checking also involved removing themes with insufficient data or merging two themes into one. Tables were utilised to map the themes and sub-themes, along with related direct quotes and these formed the basis of supervisory discussions – see Appendix 29 for an example of this tabularised data.

7.3.5 Step 5: Defining and Naming Themes

At this step, there is a need to define and further refine the themes and present data within them. ‘Define and refine’ means finding the ‘essence’ of what each theme is about and then what is meant overall and what specific aspects are captured by the theme. As part of this step, careful consideration is also given to whether or not a theme encompasses any sub-themes. It is essential that by the end of this step, each theme is clearly defined. Sometimes this clarity is not achieved at the first attempt, and then further redefining will be needed. In this step, there is the need to make sure the working titles are given to the themes and these titles are concise, succinct, and easily understandable with a clear meaning for the reader (Clarke & Braun, 2006; Clarke & Braun, 2014).

In this study, the researcher defined and refined each theme and sub-theme several times before reaching appropriate explanatory names. The researcher wanted to make sure the names of themes and sub-themes are clear and concise and relevant to answering the questions. Before the researcher reached the final version of the themes and sub-themes, these were reviewed and discussed with the supervisors until the definitions of the themes and subthemes were mutually understood (Clarke & Braun, 2013).

7.3.6 Step 6: Writing-Up

Step 6 starts when the fully worked-out themes are completed and ready for use in the final analysis. The final write-up needs to convince readers about the trustworthiness of the analysis. It is essential that the write-up includes data extracts and presents these in a succinct, logical and non-repetitive way to support the dependability and confirmability of the analysis. That means choosing very clear examples in order to demonstrate and capture key issues without giving unnecessary and complex details. These data extracts need to be inserted within an analytic narrative that presents coherent arguments in relation to the research questions. Then further discussion is provided to highlight how the research questions are answered by, and supported by, the literature (Clarke & Braun, 2006).

7.4 Findings

This section first reports on the characteristics of the sample of participants achieved for the qualitative phase of the study. It then moves on to describe the conduct of the focus groups. Finally, it presents the findings of the thematic analysis of the focus groups and then discusses these findings in light of other evidence.

7.4.1 Participants' Characteristics

A total of 20 participants were recruited for the focus groups from the two settings, whose eligibility incorporated all categories from the academic ranks. Two participants withdrew prior to the focus group sessions without giving any reason, although they had accepted the invitation and signed consent forms; one of them was an assistant professor and the other was an associate professor, each was from a different setting. Consequently, the final total was 18 participants (9 from each setting) taking part in the four focus groups, with four to five participants in each focus group. Within any one of the focus groups, the participants all came for the same institution.

Fourteen participants were female, and four participants were male. Most participants were Saudi nationals; only five participants were non-Saudi. The four focus groups included various academic ranks: 5 demonstrators, 5 lecturers, 3 assistant professors, 3 associate professors and 2 professors. No further demographic data were collected from the participants in order to retain the confidentiality of the participants. The participants were all given pseudonyms, in alphabetical order, starting with 'A' for participants in the first focus group, 'B' for the second focus group, 'C' for the third focus group and 'D' for the fourth focus group, to maintain the anonymity of the participants (Doody & Noonan, 2013). The characteristics of the focus group participants are summarised in Table 7.2.

Table 7.2: Participants' Characteristics

Initial name	Setting	Academic rank	Nationality	Gender	Qualification
Focus group 1					
Ariana	IAU	Lecturer	Saudi	Female	Master
Asma	IAU	Lecturer	Saudi	Female	Master
Aisha	IAU	Demonstrator	Saudi	Female	Bachelor
Ahlam	IAU	Demonstrator	Saudi	Female	Bachelor
Allen	IAU	Demonstrator	Saudi	Female	Bachelor
Focus group 2					
Bodour	PNU	Lecturer	Non-Saudi	Female	Master
Bahia	PNU	Lecturer	Saudi	Female	Master
Batol	PNU	Lecturer	Saudi	Female	Master
Badria	PNU	Demonstrator	Saudi	Female	Master
Bsma	PNU	Demonstrator	Saudi	Female	Bachelor
Focus group 3					
Carema	PNU	Professor	Non-Saudi	Female	PhD
Cedra	PNU	Associate professor	Saudi	Female	PhD
Ceren	PNU	Assistant professor	Saudi	Female	PhD
Cellen	PNU	Assistant professor	Saudi	Female	PhD
Focus group 4					
Dhari	IAU	Professor	Non-Saudi	Male	PhD
Dani	IAU	Associate professor	Non-Saudi	Male	PhD
David	IAU	Associate professor	Non-Saudi	Male	PhD
Dawood	IAU	Assistant professor	Saudi	Male	PhD

7.4.2 Conduct of the Focus Groups

The focus groups from each location, as planned, were conducted online through Microsoft Team meetings between 21 September 2020 and 29 September 2020. Each focus group session lasted 46 to 58 minutes. Each of the four focus groups was performed separately starting with the two focus groups with junior staff then the two seniors' focus groups. The discussion was directed by the researcher aided by the researcher assistant, as previously described. In each focus group, the researcher shared the questions one by one verbally and aligned these with sharing her screen at the same time. All the participants who took part contributed to answering all the research questions. The conversation between the participants ran smoothly, without any technical difficulties. During the focus group discussions, all participants seemed to answer freely, without any reservations or hesitation, and seemed to be comfortable and relaxed in responding to the questions. If there was need for more clarification or explanation, a sub-question or probing question was used by the researcher. Some participants were more interactive than others, coming back to answer the same question again once they had heard other participants' responses. All the participants listened carefully to each other and waited their turn to speak, although some

interjected to help their colleagues understand a question or clarify what another person had said. In most of the discussions, the participants built on each other's contributions by offering further explanation of the points being raised; senior staff often drew on their own experiences over time to illustrate what was meant. None of the participants asked to leave or logged out of the focus groups early.

7.4.3 Thematic Analysis

This section reveals the findings of the thematic analysis by presenting the main themes and sub-themes identified in relation to each topic guide question. Data extracts in the form of direct quotes are included in this section to reflect and support the interpretation of the data.

7.4.3.1 Q1- 'What makes you feel engaged with your work and committed to your organisation?'

Drawing on the results of the cross-sectional survey, the first question asked of the participants within each focus group was: 'When I asked what made them feel engaged in their work and committed to their organisation, participants reported that adequate payment, career development, and good relationships with colleagues were the most influential factors. Why do you think these were the most frequent influential factors?

Participants across all the focus groups did not seem surprised that adequate payment, career development, and good relationships with colleagues were the most influential factors reported by faculty members in terms of them feeling engaged with their work and committed to the organisation. Many participants started their responses in a way that signalled their personal top priorities. For example,

> *"Relationship with their colleagues, yes, maybe this,* ***according to me*** *[researcher's emphasis], this is the most important thing that we have" (Ariana, female, junior member of staff).*

Another example,

> *"Primarily, because I believe, for me, basically why I joined the current organization is the pay. I left the Philippines because of the better opportunities here" (Dani, male, senior staff member).*

Other participants, both junior and senior faculty members, immediately highlighted the interplay between all three factors when fostering work engagement and work commitment:

> *"Humans are always looking for financial sufficiency. It's natural,* ***from my point of view*** *(researcher's emphasis), and by achieving this, some other aspects of life are realized and achieved. As for career development, it will also have an impact on the psychology, social, and financial, as well as the moral impact on their feeling of engagement with their work and commitment to their organization. As for the third part, I think good relationships with colleagues. Yes, I think it's a very important part and this creates an enjoyable atmosphere for work… and there will be flexibility, psychological comfort, love for the work, and development of a success factor" (Bodour, female, junior member of staff).*

And similarly,

> *"I think,* ***from my point of view*** *[researcher's emphasis], this is a fair answer, as when people feel satisfied with the level of their income and feel respected by their directors and colleagues… this will encourage them to develop the skills required to do their jobs and this may reflect how they are, being ready to engage in their jobs" (Cellen, female, senior member of staff).*

Only one participant highlighted that his circumstances meant that the most influential factor for him in terms of work engagement and commitment to the organisation was different to the top three identified in the survey:

> *"The priority for me was the social factor. Personally, I was looking for social stability, for my family and myself" (Dhari, male, senior member of staff).*

As the discussions progressed within the focus groups, participants acknowledged however that the way in which adequate payment, career development, and good relationships with colleagues were prioritised was very individual. It was highlighted that sometimes peoples' priorities changed over time, primarily due to their experience in academia or their personal circumstances:

> "*This is subjective. It depends on each person, it depends on their goals… what they want to achieve out of this job" (Badriah, female, junior member of staff).*

And similarly,

> *"I was thinking, all in the future or to develop professions [meaning thinking about his career development]. But after a couple of years, I was thinking about the payment, because you know, to fulfil my expenses, I have a family" (Dawood, male, senior member of staff).*

In terms of why adequate payment, career development, and good relationships with colleagues were identified as the most influential factors on work engagement and commitment to the organisation, three main themes were identified from the data: 'Appreciation and self-worth', 'Sense of security' and 'Motivation and aspiration' (see Figure 7.1).

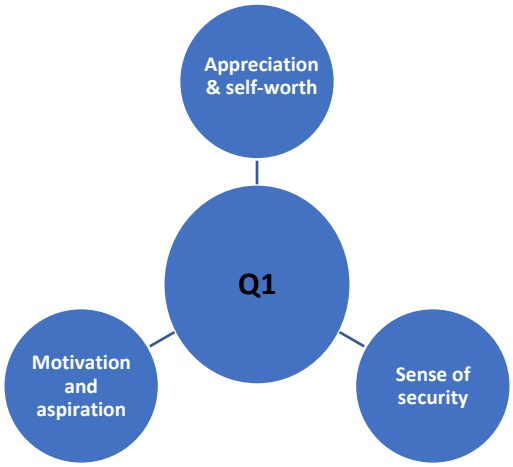


Figure 7.1: The Themes of Q1

7.4.3.1.1 Theme 1: Appreciation and Self-worth

This theme is about how feeling appreciated and well regarded, by their managers and colleagues, affected individuals' views and behaviours in relation to feeling engaged with work and committed to their organisation. When explaining the importance of appreciation between staff, supervisors and colleagues, and feelings of self-worth, within the working environment, participants used words such as 'self-esteem', 'self-confidence', 'satisfaction', 'dignity', 'honesty' and 'respect'.

For many participants, payment and rewards were regarded as one of the main ways that the organisation demonstrated their appreciation. A high commitment from the organisation, by

offering adequate income or salary, was an important reason to enhance the participants' efficiency and commitment to their work, as stated by David:

> *"…when you are adequately paid by the organization, then it corresponds with your commitment, that you will do it more, will be highly committed to the task that you will be given or has been assigned to you" (David, male, senior member of staff).*

Appreciation fuelled a feeling of self-worth and was perceived by some participants as recognition how much their contributions were valued. For example, the fact that her organisation had improved faculty members' payment so that it was equal to that received by nurses in hospital was very important to Bahia in terms of making her feel that she was appreciated; in part, this seemed to be related to her profession as a teacher in higher education being recognised as just as important as her previous role as a nurse:

> *"We need more payment as in hospital because, I can find the same job at the same salary with less demands from the work… So, when I compare… from my opinion, it's higher than me and I'm the final… the final one who will prepare the student to work in hospital. So, in my opinion I should be higher than them" (Bahia, female, junior member of staff).*

Several participants suggested that keeping people engaged in their work and committed to the organisation was related to the dignity and respect that people felt from receiving what they regarded as adequate payment for the work they carried out:

> *"I can say I live with dignity out of my salary" (Dhari, male, senior member of staff).*

Promoting a sense of appreciation and self-worth was also something that supervisors could foster amongst faculty by offering opportunities to apply for training scholarships and funding to undertake research projects:

> *"But it turned out it's not just about being better pay… it's not just about the pay or the salary or the generation, but also to get career development, exposure to an international audience… and a good collegial relationship has been very advantageous as well" (Dani, male, senior staff member).*

Some participants also suggested that when faculty felt appreciated their work efficiency may be increased because of the impact on how they felt about themselves as employees:

> *…feel respected by their directors and colleagues, so then their self-identity, self-awareness, self-confidence will be raised (Cellen, female, senior member of staff).*

7.4.3.1.2 Theme 2: Sense of Security

This theme means when an individual feels secure, safe, comfortable and stable in their job. Job security can be related to the following: good payment, a good contract or a good work environment with healthy work relationships.

For junior staff, a sense of security was consistently related to the strength and nature of relationships with their colleagues; these participants highlighted the value in working with colleagues who were able to help and support each other. Participants who were junior staff members described the positive feelings that developed from these supportive work relationships in terms of feeling 'comfort', 'confidence' and 'a family bond' and explained that this resulted in a fruitful work experience:

> *…when talking and helping each other, that give us a lovely feeling, I don't know, like a comfortable home environment, as though you are dealing with your family rather than your colleagues (Ahlam, junior member of staff).*

Bsma, another member of junior staff, suggested that being welcomed into an encouraging work environment was instrumental in ensuring a good start to her new career:

> *"About that, I'll explain my experience as a new staff member in the faculty… I was new, I didn't know, it was a different organisation, different system, so really I was in need of a good relationship with the staff to help me to find out stuff (Bsma, junior member of staff).*

Whilst highlighting the sense of security that resulted from having a high salary, senior staff also acknowledged that good working relationships with colleagues were important. They related this to benefiting from working in an environment where they felt able to openly discuss challenges that they were experiencing and being able to carry out their duties in a collegiate way. David suggested that job security was fundamentally as important as adequate pay when it came to promoting feeling engaged with work:

"My own opinion on this is there's the involvement of job security. So based on this, I think, job security corresponds with high or adequate paid" (David, male, senior member of staff).

It seemed that a sense of security was experienced differently between participants who were junior staff and those who were senior staff. This may be because at an early stage in their career, with fewer years of teaching experience, junior staff needed to be close to their colleagues to feel secure and confident. In contrast, senior staff members with their greater years of experience in higher education were confident in their roles and worked more independently so their confidence and security were less directly related to their working relationships with others.

7.4.3.1.3 Theme 3: Motivation and Aspiration

This theme is defined as individual self-encouragement and personal ambition to do or achieve what the person wants to achieve or achieving their goal because of his own enthusiasm or interest. Individuals' aspirations for the future were identified as one reason why career development was fundamentally important in promoting engagement with work and commitment to the organisation. Asma indicated that her ambition to improve her position and earn a good income meant that she regularly explored new opportunities for advancement:

"I don't like to be in one place for a long period of time, I like to develop my career and not have a routine, to develop my career, I mean, to reach a higher grade or a higher. I mean position and money wise" (Asma, junior member of staff).

In doing so, Asma also alluded to the key role that relationships with colleagues played in motivating faculty to engage in a positive way with their work, achieve their goals and feel success:

"The colleagues, your environment, are very important to motivate you to do better and to do more" (Asma, junior member of staff).

Support from work colleagues was highlighted by the majority of the participants as being essential in order to ease the workload by sharing tasks, stimulating a positive feeling, enjoyment, and a supportive and helpful atmosphere, as said by Dhari:

"Positive relationship with your colleagues, you will feel, or you will be at ease and your productivity will be much better" (Dhari, male, senior member of staff).

Whilst support from colleagues could be motivational, support in the form of organisational resources was also cited as important. For example, career development opportunities encouraged and assisted faculty members to widen their skill set, stimulated self-confidence and provided further motivation to advance their careers.

In conclusion, participants across all of the focus groups readily offered explanations why adequate payment, career development, and good relationships with colleagues were the most influential factors in relation to work engagement and organisational commitment. There was some indication in the data that junior staff gave a higher priority to good relationships with colleagues, whereas senior staff regarded adequate payment as being of greatest influence. Participants also recognised that not everyone had the same priorities and highlighted that the importance of these factors may change over time for individuals depending on their personal and professional circumstances. However, it was evident that individuals' views and behaviours in relation to feeling engaged with work and committed to their organisation were fundamentally affected by personal and psychosocial factors.

7.4.3.2 Q2 'What contributes to the way individuals react to stress and manage their stress?'

The second question that was posed to the focus group participants was: 'We know that intention to remain is influenced by the stresses that faculty members experience in their working lives. Sometimes, however, when two people face the same pressures or demands, one can cope better with the related stresses than the other. Why is that?'

In drawing a distinction between someone who can cope better with stress versus someone who cannot handle stress well, a few participants made the point that stress at home may exacerbate stress at work, or the other way around. Hence, this introduced another aspect to the extent and nature of stress experienced and contributed to how individuals might respond. It was summed up very nicely in one instance:

> *"I think this depends upon the coping mechanism the employee has and his or her resilience to work, and even his home environment. Maybe he has issues at home, so all of these factors can include coping with these stresses, and sometimes you need to vent about that stresses. This can be considered as one of the ways that*

he can use as a coping mechanism under stress. So, there are many factors, related to the person itself, the organization that listens to the employee, and the pressure and the resilience of the employee.... There are two people, if we give them the same task, we have to observe their coping mechanisms." (Ariana, female, junior member of staff).

In terms of what contributes to the way individuals cope with stress, two themes were identified in the data: 'Individual factors and personal characteristics' and 'Personal and professional support systems'; this is illustrated in Figure 7.2.

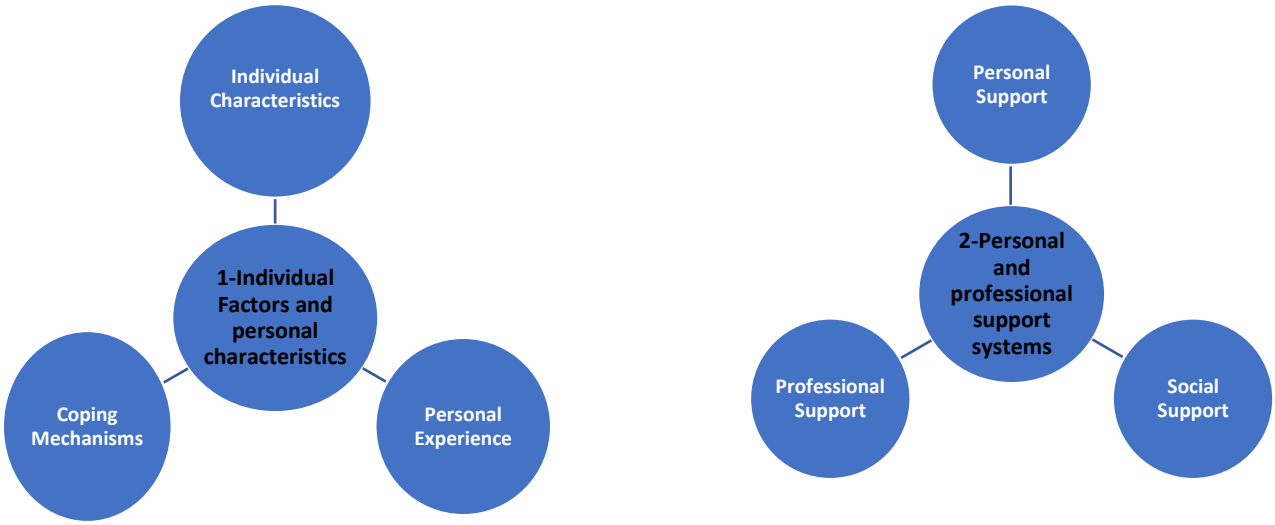


Figure 7.2: The Themes and Sub-themes of Q2

7.4.3.2.1 Theme 1: Individual Factors and Personal Characteristics

This theme means the various individual factors and personal characteristics that influence individual performance and determining their reactions, including personality, attitudes, knowledge, genetics and characteristics. This theme has three sub-themes: 'Individual characteristics', 'Personal experience', and 'Coping mechanisms'.

Sub-theme: Individual Characteristics

Over the course of the discussion, it was highlighted that an individual's characteristics, skills, or competencies influence self-management and dealing with stressful situations, such as

self-awareness, emotional intelligence, and resilience. This point was raised across the groups highlighting those certain inherent factors aid how an individual may respond to stress as well as how they may cope with it. Personality, therefore, has an influence on the appraisal of and ability to cope with stress; it also has a crucial role in regard to shaping the stressful situation and why it is perceived as stressful. Ariana explained:

> *"It depends on the person's personality or characteristics." (Ariana, female, junior member of staff).*

This was built upon by discussing that an individual also has the potential to control their response to stress. This personal characteristic might be acquired when encountering different scenarios or may be easily learned. A good example of this competency, mentioned by many junior and senior staff, is emotional intelligence, along with other skills mainly used under the umbrella of the broad term of emotional intelligence, such as self-awareness and resilience. One senior staff summed this up well and said:

> *"We could say it's flexibility; some people have flexibility or resilience more than others and… in mental health, in terms of conceptualisation we call it 'emotional intelligence', which, in simple words, means people have the ability to manage to cope with different situations in an easier way than others. Those people might have high self-awareness, self-regulation, high self-motivation and they also have high social skills - they should have a high social skill to work with different situations and with different issues and to work under pressure in an easy way more than others." (Cellen, female, senior member of staff).*

And similarly, junior members of staff echoed this by stating:

> *"If they have more skill, stress control, time management techniques or skills, emotional intelligence." (Batol, female, Junior member of staff)*

Put simply, Dawood added,

> *"Some people have some special capability to work under stress and this is normal. For example, if two persons were getting the same stress and one maybe, was too depressed or stressed and withdrew from the work etc." (Dawood, male, senior member of staff).*

Sub-theme: Personal Experience

In addition to an individual's characteristics, what also emerged from the discussion was that personal experience also influenced how one responded to stress and dealt with it. This sub-theme was defined as the internal experiences that can inform the person to be good at evaluating and dealing with the circumstances or surrounding stressors. This experience might have come from personal experience, age, from having previous experience of dealing with stressful situations.

Personal experience with stress, stressful situations and how one copes with them has a crucial role in how an individual can manage stress. This found resonance across all the focus groups. Personal experience influences the evaluation and appraisal of stress and then subsequently one can cope better. Experience can lead to a good evaluation of the stressful situation, i.e. whether it is threatening or normal, and then can produce a suitable reaction by using internal coping skills. These coping skills might be acquired through experience or by having dealt with several past stressors. Cedar explained this example well, and said,

> *"During my PhD, which is more difficult, I faced stress, difficult stresses and more, but I can cope with this, because I already had this experience." (Cedra, female, senior member of staff).*

And similarly,

> *"I think it also depends on experience, if you have experienced pressure more, then you can ignore it." (Allen, female, junior member of staff).*

This resonated with other participants in the group as well:

> *"I think it depends on the person, depends on the experience of the person, it depends how he deals with the situation." (Asma, female, Junior member of staff)*

A person's age can have an influence because it may align to the extent of their personal experience of stress. This was highlighted mainly by seniors as they are older and acquire more experience to help them cope better. The older and more mature one is, the more experience they have with stressful situations, thereby allowing them to develop tools and healthy coping mechanisms. Dani observed,

> *"The way people would respond to demands or pressure or stress, would be greatly affected or be influenced by their level of maturity. So, age is one factor that has to be considered; because one's ability, as most development theories would say, or suggest, that level of maturity would greatly affect how people react to different types of demands or pressures or stresses." (Dani, male, senior member of staff).*

Hence, there was a great deal of consensus across the focus groups about the role that one's past experiences can play on how an individual reacts to stress and copes with it.

Sub-theme: Coping Mechanisms

This sub-theme encompasses the strategies or creation of positive ways to deal with stressors to improve and manage difficult emotions. Participants identified that some people may use direct behaviour to deal with and manage the stressor, such as problem-solving or using relaxation strategies.

> *"Learning how to relax, to get some support, to work under stress or under tension and pressure- all these are factors that help this person to deal with stress and to cope and to have the intention to stay in their job." (Bodour, female, junior member of staff).*

Another way of coping which was identified exclusively by female participants was using emotional coping to improve the feelings caused by the stressor; this might involve talking about painful emotions or seeking help in order to deal with or adapt to a situation:

> *"It's like a load on your shoulders and you finish venting or get to express your emotions." (Asma, female, junior member of staff).*

Fundamentally, participants appeared to be making the point that no two people would respond to stress in the same way as their coping mechanisms would vary according to their life and work experience as well as inherent individual characteristics. However, a more experienced individual who has encountered many stressors during their working life and who is able to appraise the stressful situation and apply previously learnt coping mechanisms will accordingly respond better. This was raised mainly by senior staff, who spoke not just about having experience of dealing with stressful situations, but also about the experience of stress itself. David summed this up well and said:

> *"I encountered all kinds of scenarios or situations and I learn from them. So, I am able to understand them via this previous exposure to this stress or stressors. Here the respondent reacted like this way because they may have had this experience before. So he was able to make some adjustments." (David, male, senior member of staff).*

7.4.3.2.2 Theme 2: Personal and Professional Support Systems

This theme reflected the potential for a supportive network from colleagues, the community or from the organisation, i.e. helping or assistance systems at work, to assist the individual in coping with stress. This theme includes three sub-themes: 'Personal support', 'Social support' and 'Professional support.'

Sub-theme: Personal Support

The role of having a support system emerged as a key component in being able to deal with stress in a healthy manner. One such source of help or assistance comes from individuals, such as friends or family members, as Bahia said,

> *"Also, if he had a partner, he can release his stress at work." (Bahia, female, junior member of staff)*

Sub-theme: Social Support

This sub-theme encompassed the psychological and material resources that come from a social network to help cope with stress. Here, the social support might be from the surrounding community. This point was raised by the senior staff, perhaps owing to their experience of facing and dealing with stress and drawing on the social supports available to them, more than the junior staff. Ceren explained,

> *"Sometimes social issues, and the people surrounding them, whether the community is supportive of them or not. But I believe it's dependent more on the personal factor. It's an accumulative factor inside the people themselves and their adaptation and coping mechanisms for these pressures". (Ceren, female, senior member of staff)*

This found resonance in the group and was further elaborated on by her colleague,

"Dr. Ceren also says about social support. I think social support is important for how to deal with this stress." (Carema, female, senior member of staff)

Sub-theme: Professional Support

In addition to personal and social support, the workplace was also discussed as an avenue where individuals may feel supported by their colleagues or organisation. Since stress often arises at work, it was discussed that it was crucial to have a support network at work as well, in order to cope better. The benefits of this type of support were raised by junior and senior staff:

"I think if you have support at the workplace from your colleagues, if you have good colleagues, who are willing to help you and support you at all times, that will help in coping with stress." (Dawood, male, senior member of staff)

"If you have support from your faculty, from your colleagues, from your supervisor himself; if you have support from a higher level that will motivate you and inspire you to do your work, and to cope with your stresses, I think that helps a lot''. (Asma, female, junior member of staff)

In conclusion, the participants responded to this question by explaining the multifactorial nature of stress responses, which included highlighting the links between home life and the workplace. Participants also drew links between individual characteristics impacting competency to manage stress and personal experience in coping with stress, both of which influenced the development of coping mechanisms. Junior and senior staff both suggested that emotional intelligence was one of the most influential factors on how the individual coped with stress. Female junior staff, in particular, highlighted the importance of personal support, while professional support was emphasised by senior staff as a playing a crucial role in reducing the influence of stress. In addition, the use of emotional expression as an adaptive behaviour was something that was mentioned by female junior staff.

7.4.3.3 Q3 'Why is concentrating more at work related to less burnout and better mental health?'

The third question that was posed to the focus group participants was, 'When exploring the demands of their job with participants, one of the things that surprised me was that faculty

members who had to concentrate on their work more and had continuous thoughts about their work reported experiencing less burnout and better mental health. Can you help me to understand that?

Some participants were surprised by these results from the cross-sectional survey, others were not; it was mainly senior staff who were unsurprised. As with the previous questions, most participants explained this result by relating it to personal factors and environmental factors. The findings from the discussion have been classified under two themes, as may be seen in Figure 7.3 – 'Personal skills and characteristics' and 'Work environment factors'.

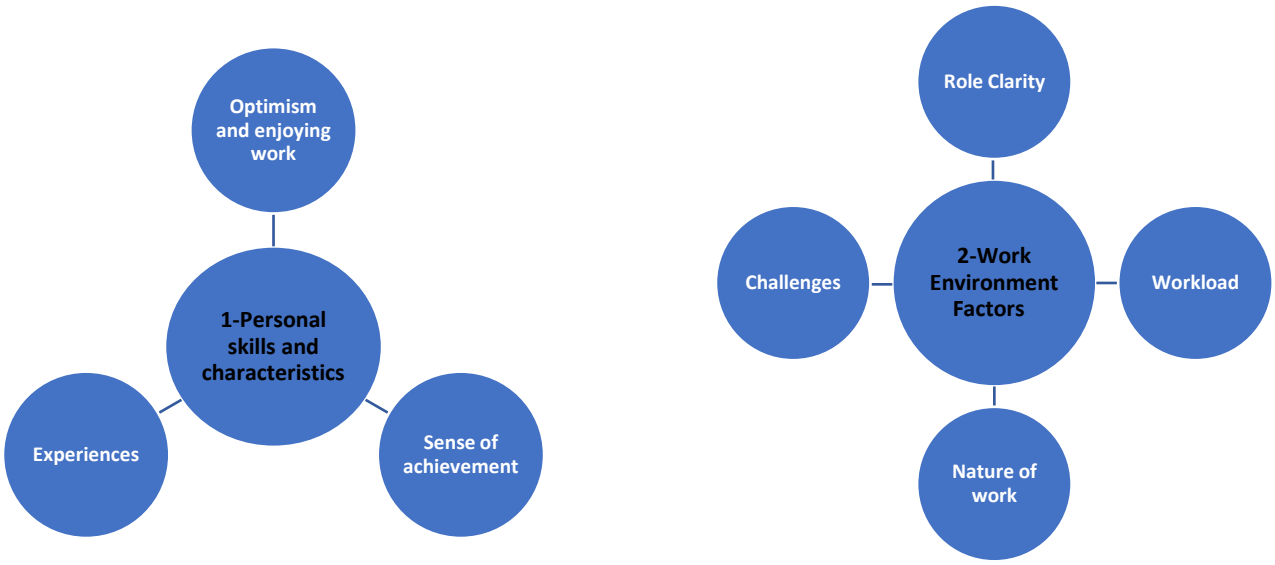


Figure 7.3: The Themes and Sub-themes of Q3

7.4.3.3.1 Theme 1: Personal Skills and Characteristics

These are defined as various personal skills and knowledge that shape an individual's performance, i.e. attitudes, personality, perceptions, experiences, and personal characteristics.

Sub-theme: Optimism and Enjoying Work

This sub-theme relates to when an individual has a positive view or outlook for the future, good expectations, confidence in success, and loves what he is doing or takes pleasure in doing his work and other related activities. As discussed in the other questions, participants asserted that one's outlook in life, their disposition or characteristics have the potential to influence how they

view stress, their work and how they deal with any difficulties. Similarly, one's outlook and attitude also have a bearing on whether or not burnout is experienced. This was a viewpoint expressed by the senior faculty more than junior staff. David explained this well when he said:

> *"If you are ready for what you are doing, you're happy doing it. You are focused on what you want to achieve, so this will not give you a lot of mental issues or mental problems... This challenge always gives your mind a positive outlook so you cannot think of something as a negative or burnout issue." (David, male, senior member of staff)*

There was some suggestion that an optimistic approach has the potential to buffer burnout. That is, enjoying one's work and being good at it were seen as aspects that could offset feelings of burnout. This was explained by Dawood:

> *"The more you are passionate about your work or the task you have, the more you enjoy and work with a positive mind." (Dawood, male, senior member of staff)*

Sub-theme: Sense of Achievement

This sub-theme means a feeling of success and accomplishment when reaching targets or aims and achieving goals. Achieving one's tasks for the day, reaching goals, feeling success and meeting deadlines were offered across the groups by both junior and senior staff as possible reasons why those who concentrated on their work reported lower rates of burnout. Ariana put this across as:

> *"Concentrate on your achievements, and at the end of the day you achieved them and you feel that you are satisfied that you've done everything, and you think that you are not burned out." (Ariana, female, junior member of staff)*

It was also summed up well by David who stated:

> *"You are preparing a lot of things, and there are stressors along the way and it's possible you want to concentrate and focus on this issue that you want to achieve, and at the same time you are expecting something that these things must be done and these things must be achieved, and you will not think about stress anymore." (David, male, senior member of staff)*

Hence, focusing on work and maintaining a positive disposition were attributed to the reduction of instances of burnout.

Sub-theme: Experience

This sub-theme relates to the number of years or service working in a higher education institution. It was mentioned that one's experience and years of service would influence how staff focus on work while coping better with stress, their workload, and in turn, whether they feel burnout. Bahia observed:

> *"Maybe the number of years he's been working in the institute makes a difference. If he's been working there for many years, he might be better than the others who have less experience." (Bahia, female, junior member of staff)*

7.4.3.3.2 Theme 2: Work Environment Factors

This theme relates to issues associated with the organisation and the work environment that may influence an individual's performance and response to challenging situations at work.

Sub-theme: Role Clarity

This sub-theme means the understanding an individual has of his job tasks, specific role, responsibilities, and processes at work.

Having clarity regarding one's role came up as an issue that may have a bearing on feeling burnout. This is because if unplanned tasks are added to one's day, it may delay the completion of their existing list of tasks and deliverables. Lack of role clarity was considered as having an adverse impact on the predictability of one's day and the potential to interfere with one's ability to focus on the tasks required. This was raised by both senior and junior staff. Ariana stated,

> *"They have to give you tasks that match your abilities so you can focus on them. However, at times tasks get added which aren't a part of your job description. If I have a job description, no one can distract me; no one can force me to do anything." (Ariana, female, junior member of staff)*

Sub-theme: Nature of Work

This sub-theme means the type of work or basic daily tasks carried out as part of the job, including the kind of job, nature of the work environment and skills required to undertake this work. The nature of one's work, including the tasks involved, skills required and work environment, were all identified by participants as playing an essential role in determining how much concentration was required. As Bodour suggested, having an understanding of one's work was key to avoiding related stresses and burnout:

> *"I'm not surprised with your result because I think it's a person's understanding of the nature of his work and his job, and the dimensions of his job also." (Bodour, female, junior member of staff)*

Participants indicated that the nature of academic work, with its requirement for concentration all the time for the preparation of lectures and research work, is part of the normal mental workload felt by those striving to achieve their best in the work environment, so reducing the feeling of burnout. This idea was supported and explained well by both junior and senior staff. In contrast, it was suggested that, if the nature of work required physical effort, rather than mental effort, avoiding burnout may be more challenging.

> *"Because if you look at a burnout situation, or burnout experience or frustration experience in other kinds of work, other than faculties or those with a PhD, with higher level education, compared to a blue-collar job, I think frustration or burnout situations or experience would be higher. I'm not surprised that this is the situation for faculty members, especially in those who are teaching at the higher level - in the higher education institutions" (Dani, male, Senior member of staff).*

Sub-theme: Workload

This sub-theme refers to when the amount of work is more than expected, resulting in an adverse impact on an individual's ability to concentrate at work. The participants made the point that an increased workload may be viewed as both a good thing and a bad thing. As with stress having the potential to be a positive influence (as discussed above), having a heavy workload can lead to one feeling productive and successful, especially if they generally enjoy the work that they

do. On the reverse side, it could also make one feel burdened. Asma reflected on how she felt about here workload and how she benefited from feeling busy:

> *"To be honest, if I have a load of work, I feel more successful, I feel like if I have a lot of things to do, I have to do them, and then if I don't have that much work, I will not be happy." (Asma, female, junior member of staff)*

The adverse impact that the distractions of a heavy workload could have on being productive at work and the consequences of that in terms of stress and burnout was also highlighted:

> *"Being distracted at work and not completing work can also lead to feeling burnout." (Ariana, female, junior member of staff)*

Ahlam captured the essence of these discussions about the influence of excessive, unexpected workload and stated:

> *"When someone adds tasks to your workload unexpectantly, it is distracting and interferes with your ability to achieve the work that was planned. As long as you manage to achieve what you set out to do that day, for example specific tasks that you feel you must do that day, you will feel a sense of accomplishment, even if you don't achieve all of the tasks or the ones that have been added to your workload." (Ahalm, female, junior member of staff).*

Sub-theme: Challenges

This sub-theme is defined as the difficulties or obstacles that test a individual's abilities to achieve what they want to at work. Participants suggested that some people may view the challenges of work as stimulating, causing them to be more precise and thus concentrate more to overcome these obstacles; for some people, this can create a sense of satisfaction and achievement rather than causing burnout and poorer mental health. In this respect being challenged by work can make individuals more competent and more engaged in their work. In this context, Ceren explained that:

> *"If you are having just this challenge to do, a job that is requiring precision and concentration, and you do it, which means you are efficient enough for this, and you are engaged enough in it, you will experience low burnout and better mental health." (Ceren, female, senior member of staff)*

In conclusion, the participants discussed a host of reasons that may explain the link between those who had to concentrate more on their work but also experienced less burnout and better mental health. Some of these reasons were inherent to the individual and outwith the control of the organisation, others were related to the work environment and had the potential to be modified or influenced in ways that might facilitate individuals' performance at work.

7.4.3.4 Q4: 'Why do female faculty members report greater exhaustion and less satisfaction in their work than the male faculty members?'

The next question posed to the focus group participants was, 'Why do you think the female faculty members reported greater exhaustion and less satisfaction in their work than the male faculty members?' From the four focus group discussions, it emerged that the reasons for the female faculty members feeling more exhausted and less satisfied were varied and complex. These reasons were classified into two themes: 'Cultural influences' and 'Responsibilities', as seen in Figure 7.4.

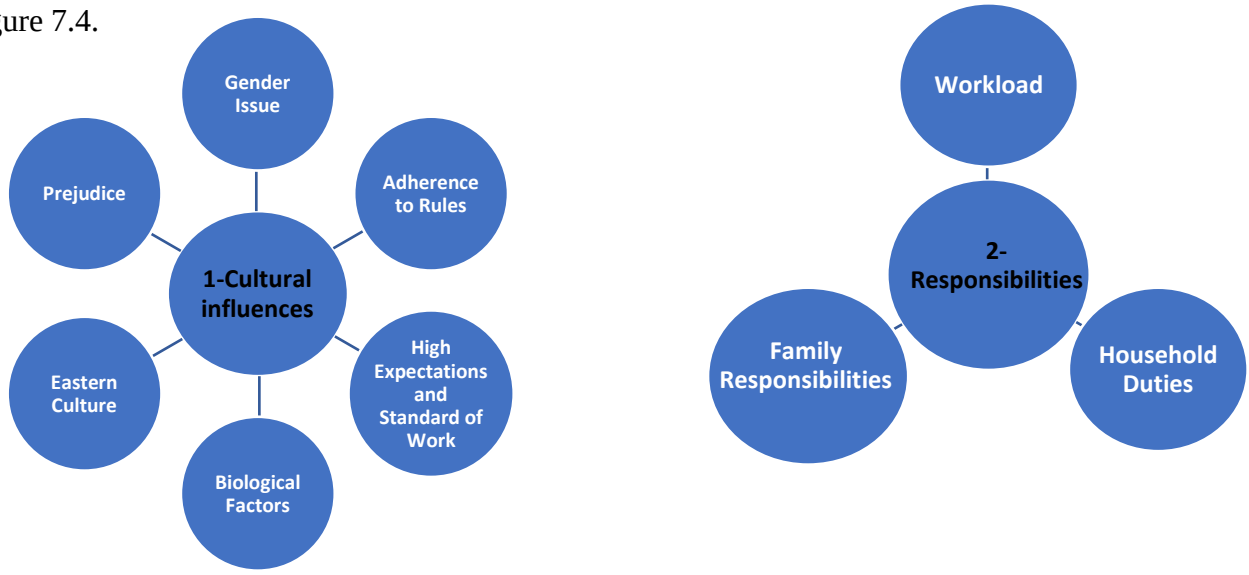


Figure 7.4: The Themes and Sub-themes of Q4

7.4.3.4.1 Theme 1: Cultural Influences

This theme defines how culture informs and influences gender roles within the workplace in Saudi HE; it relates to the beliefs, values, norms and ways of life for particular groups of people that show in their behaviour, habits, attitudes, and their morals toward others. This theme has six sub-themes: 'Gender issues', 'Adherence to rules', 'High expectations and standard of work', 'Biological factors', 'Eastern culture', and Prejudice'.

Sub-theme: Gender Issues

This sub-theme encompasses all the aspects and concerns relating to the similarities and differences between men and women with regards to personality, nature, qualities, attitudes, and habits which define gender expectations in the workplace.

Within all the focus groups, participants were quick to explain that these results, showing differences between male and female faculty were understandable. Explanations were offered, and accepted by others, that focused on it being a part of their nature for women to want to excel at work and to empower themselves; and that women often struggle to reach their objectives and to be satisfied with themselves, and therefore, this struggle might drive them to be easily frustrated. For example, during the discussions, Bodour pointed out that:

> *"Lower satisfaction in their work than male faculty members, might be because of the ambition of the women. It's unlimited, and she always has dreams, she strives for the best and for self-actualization all the time, which always makes her feel that there are still things she must do, and goals that she wants to achieve - that's why she might feel less satisfied." (Bodour, female, junior member of staff)*

Sub-theme: Adherence to Rules

This theme means how an individual recognises, accepts and adheres to rules and processes within an organisation. Participants suggested that, in this current culture, women typically follow guidance given to them at work and try to be more loyal. Women's adherence to the rules and lack of assertiveness in determining the work they take on were also seen as contributing factors for their exhaustion. Aisha summed this well by saying:

> *"Women are kind, some of them they are kind and too shy to say, "No", and accept more than they can do. But males say, "No", or "I can't" - they have more assertiveness than some of the females, but not all of us." (Aisha, female, junior member of staff)*

In the discussion, there was some suggestion from the participants that because women followed the rules at work, they could be regarded as being inflexible when compared to men. This only came up in discussions with junior staff. Allen stated:

> *"I feel is that men can play with the rules so they can reach their goals - they are flexible, but the females are strict with the rules, they feel like they cannot be modified. That's what I noticed, they stick with the rules to reach the goal, so I feel like the men are more flexible at work; they just get the goal done without caring about the rules." (Allen, female, junior member of staff)*

Sub-theme: High Expectations and Standard of Work

This sub-theme is defined as the standard and quality of work and attention to detail. Participants suggested that women seem to be more meticulous in their work, being detailed-orientated and concise in undertaking work tasks. Among both the junior and senior staff, it was noted that women are typically intent on doing their jobs well and have high standards for the quality of the work they hand in. For example, Badria said:

> *"Women are more detail-oriented. They care about the details of their work and how certain things should be done in a certain way, the quality of work is usually higher than the males." (Badria, female, junior member of staff)*

This was seen as a factor in them not being as satisfied with their work as men. Constantly striving for perfection and not settling for average work would explain their relative dissatisfaction and greater exhaustion. Interestingly, this observation was made by male members of staff as well as female staff. Dawood summed this up by saying:

> *"Women always have higher expectations in all they do, in any task even at home. They aren't satisfied with less or medium." (Dawood, male, Senior member of staff)*

Sub-theme: Eastern Culture

This sub-theme is defined as all the norms and beliefs that are associated with people living and working in Eastern regions, specifically with regard to the roles and responsibilities of women. Participants, across the focus groups, maintained that Eastern women are primarily responsible for home duties and childcare, alongside her husband's needs such as preparing his food. All these factors contribute to the sense of exhaustion felt by women when they are also in paid employment. Badria highlighted this and said:

> *"The cultural influence plays a great role in the woman's motives to be better at their job and this may have put some burdens on women, so they may experience more exhaustion in their work." (Badria, female, junior member of staff)*

Sub-theme: Prejudice

This sub-theme relates to the unequal treatment of women and men in the workplace, i.e. a bias in treatment and more privileges for men than women. Participants discussed the unequal treatment of men and women in the workplace. The preferential treatment of men perhaps makes them feel less pressure to excel, as opposed to women, who may feel as though they have something to prove. Ceren explained:

> *"There's a little bit of dominance by men - in the work environment they have more… it's a little bit of privilege to be a man and having this job as faculty that will be easier for them more than women." (Ceren, female, senior member of staff)*

Male participants also noted that there were differences in what was expected of, and accepted from, men and women in the workplace. It was suggested that, at times, male privilege meant that women were excluded from certain jobs and were expected to be both at home and at work; this was also seen as a significant contributor to their exhaustion. Prejudice seemed to be an accepted part of work life, as said by one senior male:

> *"Male dominance." (Dhari ,male, senior member of staff).*

Sub-theme: Biological Factors

This sub-theme reflects the biological gender differences that influence an individual's emotional responses, behaviours and attitudes in the workplace. Some participants mentioned that women's biology could potentially have an impact on their feelings of dissatisfaction at work. That is, the biological nature of women reflects those women are always reported as being more sensitive, empathetic, and more easily distressed than men. Dhari said:

> *"One of the factors for the differences between the males and females could be their biological differences." (Dhari, male, Senior member of staff)*

In the discussion, both junior and senior participants highlighted women's ability to care deeply about their work and the wellbeing of their co-workers. For example, women were regarded as usually feeling empathy and concern for the needs of others around them at work. This propensity for women to be more emotional and caring than men was identified as a reason for them to being more easily exhausted than men. Badria captured this well and said:

> *"I think women pay attention to their emotions and the team's emotions. They care that their team is happy or sad, whether their colleagues are more involved in the work or not, and that puts more of a burden on them than the males, who just don't usually care and they're objective and they don't think of emotions the way women think of them." (Badria, female, junior member of staff)*

Several participants explained that women's emotions influence their work outcomes, so happiness or sadness will reflect on their work satisfaction. In contrast, it was suggested that men are successful at isolating their emotions from work matters. One such observation was made by Ariana, who said:

> *"Males separate their emotion from the work." (Ariana, female, junior member of staff)*

Hence, once again, the fact that women invest emotionally in their work was highlighted as a potential cause for them feeling more exhausted than men. Cedra summed this up well and said,

> *"I think it is the nature, that for us females, ... maybe because we are more sensitive, we don't want anyone who comes to work to feel guilty, or to feel sad, to feel unhappy, we try to be friends with all of our staff. But the men are not as*

caring as women when they are in a high position, and they will be more satisfied." (Cedra, female, senior member of staff)

7.4.3.4.2 Theme 2: Responsibilities

This theme encompasses all the tasks and duties that are undertaken by an individual, including work responsibilities, and household and family responsibilities. This theme includes three sub-themes: 'Workload', 'Household duties' and 'Family responsibilities'.

Sub-theme: Workload

This theme means when the amount of work is more than expected or when assigned to do something which is difficult to manage or achieve. The double burden of professional responsibilities and family responsibilities faced by women was a recurring theme in this discussion. It was proposed that this resulted in an unmanageable workload which contributed to the experience of exhaustion and dissatisfaction for women. With regard to this specific sub-theme, Bahia said:

"We are lecturers at the university and mothers at home, so you are responsible for the demands of other people. Also, I found at our institute, more work demands are put on females rather than on males." (Bahia, female, junior member of staff)

Men too felt that this was an accurate depiction of women's workload, with one of them contributing to the discussion by stating,

"One can argue that female faculties might have a double life. They have a life in their home and another life in their work. This could be a factor that makes them more exhausted than the male." (Dhari, male, senior member of staff)

Sub-theme: Household Duties

This sub-theme refers to all the household tasks or chores that need to be regularly done such as cleaning, taking care of children, and cooking. Participants appeared keen to highlight that women juggle multiple responsibilities even within the home, where they faced the demands of playing different roles as wife, mother and daughter. It was argued that these, coupled with demands at work, were bound to cause increased exhaustion for women:

> *"The woman's demands from the surrounding community are higher than the man's; she has more obligations... her work as a faculty member, second is her job as a full-time mom, mother of the kids, and also very high expectations from her as a wife." (Ceren, female, senior member of staff)*

Sub-theme: Family Responsibilities

This sub-theme means all the family commitments and obligations that women are responsible for as mother or daughter, or even as grandmother. Aside from household duties, participants explained that responsibilities are placed on women from a young age. For example, Batol discussed how little priority was given to a woman's career when her familial responsibilities coincided with key professional milestones.

> *"Women start their crucial role in engagement, get married, while starting her career. Then becomes a mother, grandmother, in time of retirement. That can be hard for her, I think, to overlap all the difficulties." (Batol, female, junior member of staff)*

This point was brought up with regard to the broader discussion on the multiple responsibilities that women have. It was discussed that in addition to work stress, women also have the responsibility for their homes and family. As Asma put it:

> *"It's that we have more responsibilities than the men to be honest, even though, whether you are single, married or you have kids or not, you feel more responsible, that's why we feel more exhausted and we take a lot on because we always want to empower ourselves, empower women and be leaders." Asma, female, junior member of staff)*

This resonated in multiple focus groups and ties together the expectations placed on women to excel in all areas of their lives, not just at work. Hence, this expectation may be a contributing factor to the greater exhaustion and less satisfaction reported by women.

In conclusion, in all the focus groups, both female and male participants openly discussed the cultural influences on exhaustion in the workplace and job satisfaction. There was a lot of overlap in their explanations of the different gender expectations for men and women. There was also a strong sense of women having an innate ability to be caring and more emotional, which meant that they cared not only about their family, but also about their work and colleagues, adding

to their mental burden and stress. However, the female participants gave much greater emphasis to the workload related to their family responsibilities, whereas the explanations offered by the male participants focused more on the notion of prejudices and the high expectations placed on women to deliver high quality work.

7.4.3.5 Q5- Why do Saudi nationals report poorer mental health in their work than non-Saudi faculty members?

The fifth question posed was, 'Why do you think Saudi nationals reported poorer mental health regarding their work than non-Saudi faculty members?' Two themes were identified in the data: 'Cultural reasons' and 'Work related reasons', as shown in Figure 7.5.

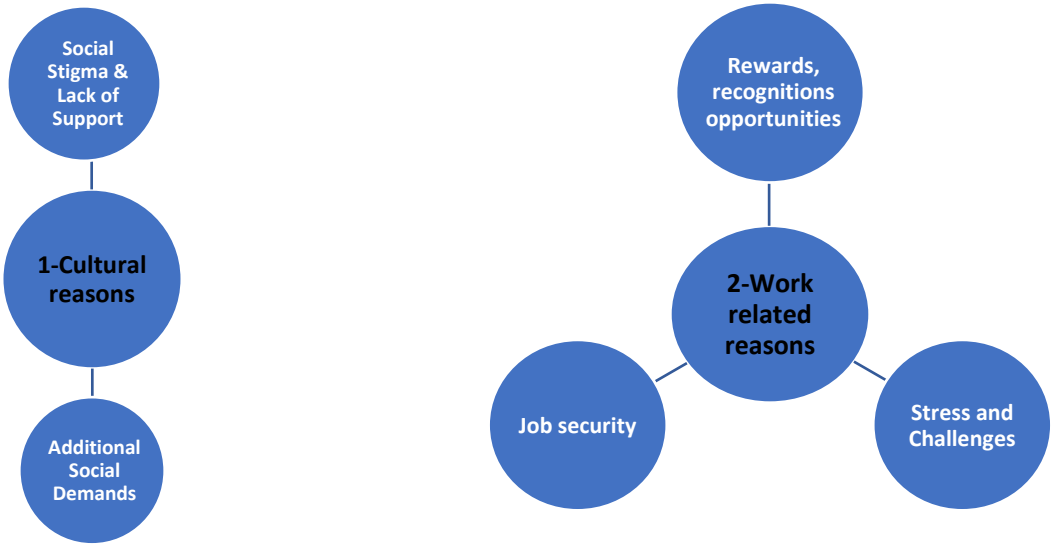


Figure 7.5: The Themes and Sub-themes of Q5

7.4.3.5 .1 Theme 1: Cultural Reasons

This theme reflected the beliefs, values, and norms of how mental health issues are viewed and judged in the Saudi context**.** This theme had two sub-themes: 'Social stigma and lack of support' and 'Additional social demands'.

Sub-theme: Social Stigma and Lack of Support

This sub-theme means when society labels the behaviour of individuals seeking support for mental health issues as unacceptable.

In each focus group, there was recognition that there was stigma attached to seeking help for mental health issues in Saudi Arabia. The participants felt that this could potentially contribute to poorer mental health among Saudi nationals because of the fear of being labelled as unstable by society if they sought help for their mental health. Asma explained:

> *"I believe that in the Saudi community, feelings or expressing yourself is still not socially acceptable. So, we don't express ourselves, so maybe that's why our mental health is not as good as the non-Saudis." (Asma, female, junior member of staff)*

Additional explanation was that the people of other nationalities tended to look out for each other and supported those from their own countries, perhaps in an attempt to build their own community with a similar culture. Saudi nationals, comparatively, did not practice such support with their fellow citizens; again, Asma pointed out:

> *"The non-Saudis might like to have the support. Indians or Philippines, and other non-Saudis, they support each other because they know they are from the same country and they will have more support." (Asma, female, junior member of staff)*

Sub-theme: Additional Social Demands

This sub-theme means wider social commitments and expectations from close family members, other relatives and the community as a whole. The participants discussed that since non-Saudis often came to the country without their families, it was possible that they faced fewer stressors from the complexities of family life. In contrast, Saudi nationals have a multitude of additional social commitments to their close family members, other relatives and wider communities that need to be fulfilled. Accordingly, Batol elaborated this by stating:

> *"Saudi citizens are citizens who have full participation in the community; they have to do their job in their family and in their community, as opposed to non-Saudi workers." (Batol, female, junior member of staff)*

7.4.3.5.2 Theme 2: Work related reasons

These are factors related to how an individual is treated, supported and rewarded within an organisation. It has three sub-themes: 'Rewards, recognition and opportunities', 'Stress and challenges' and 'Job security'.

Sub-theme: Rewards, Recognition and Opportunities

This encompasses all the benefits that an organisation offers to their employees such as an allowance, accommodation, and health insurance, as well as opportunities for individual recognition and career progression. Participants claimed that non-Saudis receive benefits that enable them to concentrate solely on work, such as accommodation, teaching allowances, health insurance, and free travel. In contrast, Saudi nationals do not have these advantages as they are local citizens and, as such, the organisation is not committed to offer them these benefits or rewards because they are supposed to own their houses and transport. In regard to these points, all the Saudis and non-Saudi participants agreed that non-Saudis receive benefits that make them more satisfied. Specifically, Ariana stated:

> *"The non-Saudis have their own housing, allowance, they teach their kids, their transportation allowance, etc. Maybe they feel they are satisfied even though they have the same workload as the Saudis." (Ariana, female, junior member of staff)*

Also, this thought was agreed by non-Saudi participants, as David summed up by stating:

> *"Non-Saudis are motivated - perhaps they have a good salary, and they get a higher income than what they would receive in their home country, so this is something to do with motivation, or rewards, they get from working here. That's why they're clearly motivated and they have a good mental attitude compared to the Saudi national." (David, male, senior member of staff)*

A similar point was raised regarding the differences in rewards, recognition and opportunities between organisations within the public and private sectors. It was suggested that in the public sector, such as within governmental universities, people lose interest in their work because they already receive high salaries and permanent contracts, and thus there is no pressure

to develop their skills to ensure contract renewal, which in turn leads to poor mental health. Dawood stated:

> *"Saudis have poor mental health because they don't actually have to work harder in the governmental sector, they don't have to develop their skills, they have good payments; so one's maybe thinking, "Why do I have to work harder if I'm satisfied with what I have now?". (Dawood, male, senior member of staff)*

Contrastingly, one senior participant said something very different; he claimed that Saudi nationals are greatly privileged with a wealth of resources available to them and, therefore, he could not understand the basis for the reports of poorer mental health among Saudi nationals. Dahari stated:

> *"This is a striking result, taking into account that all the resources are available for the Saudis, all the resources are available compared to other faculties in other countries, for example. So, yeah, I think the Saudis are better to answer this question." (Dahari, male, senior member of staff)*

Another reason was that when Saudi employees have disputes and compete to obtain higher or specific positions at work. This was an issue touched upon by the junior staff, who saw Saudi nationals as being competitive. Non-Saudis, they felt, only work in the country for a limited period, and so do not compete for the same jobs. This plays a role in the amount of stress that Saudi nationals face and has an impact on their mental health. Ahlam summed this up as:

> *"In the work environment, every Saudi faculty member wants to do better than the other members, he / she wants to have a higher position than some of their colleagues. They want to show that they're better than other Saudi colleagues, rather than non-Saudis, because non-Saudis will have a contract for two years and then leave." (Ahlam, female, junior member of staff)*

Sub-theme: Stress and Challenges

This sub-theme means all the pressures that are faced which come from different sources; it might be from workload, social or financial. These could reflect the cultural influences of working within the governmental sector. Stress and pressure might be faced by Saudis. One example of the challenges faced is how people in Saudi communities view themselves as lucky and have a gifted life, even when they do not. The challenge might also be the workload pressure,

adaption to work difficulties, social or financial causes, and culture appropriate to work needs. In accordance, Bahia stated:

> *"In my opinion, I think Saudis have higher expectations than what is found in his work. You know, as you are in academia, the community looks to you as something… that actually it's not, it's not. I think from many aspects, like social, cultural, economics*." *(Bahia, female, junior member of staff)*

However, Dahri raised an interesting point in stating:

> *"Saudi workers are used to the easy job, and therefore, they find it difficult to adapt to more difficult jobs; find it difficult to adapt to jobs that are associated with more pressures." (Dahari, male, senior member of staff)*

Nonetheless, an isolated view was raised by senior participant that opposed the survey result; she exerted that the stress incurred by leaving one's home country should surely mean that non-Saudis are more stressed than Saudi nationals. Ceren stated:

> *"I think for someone who is coming away from his environment, from his country, from his home place, of course he will - I believe he will feel more stressed." (Ceren, female, senior member of staff)*

Sub-theme: Job Security

This sub-theme is defined as when the individual feels sufficiently secure and comfortable to keep them in the job, arising for different reasons, such as their work contract.

All non-Saudis that come to Saudi Arabia under limited contracts need to renew them annually or every 2 years. In contrast, Saudis work continuously until they reach retirement age. Hence, the international faculty is employed for a limited time for certain purposes of work, so they can give their complete attention to and concentrate exclusively on their jobs, which are highly task oriented. This subsequently contributes to feeling secure and satisfied by achieving their target tasks. Correspondingly, Ariana added:

> *"The non-Saudis know they come here to a foreign country for a specific time written into a contract." (Ariana, female, junior member of staff)*

Other aspects that participants discussed in relation to job security related to differences between public and private sector organisations in the country. In particular, contract work in the private sector motivated people to develop their skills and improve their outcomes, which resulted in them becoming more interested and satisfied by their work. These points are well illustrated in the statement by Dawood:

> *"I do agree that Saudi nationals reported poor mental health with their work. In the government sector, such as the government universities, people lose interest to work and this leads to poor mental health. In the government sector, employees feel secure because they will stay in their work even if they did work hard or get a good annual evaluation that make them not interested to work to have a good evaluation to renew their contract with the government sectors; they don't link the evaluation with staying in the work. In contrast, in the private sector, people work hard to improve their skills, so they can achieve a good evaluation and then they will have their contract renewed every year." (Dawood, male, senior member of staff)*

In conclusion, there was much agreement across all the focus groups about why the reported differences in mental health between the Saudi nationals and non-Saudi faculty existed. Firstly, the poorer mental health of Saudi nationals was related to their reluctance to seek help and to the burden of additional social responsibilities and demands on their time. Secondly, deep-rooted differences in employment terms and conditions, and opportunities for promotion, for Saudi nationals and non-Saudi faculty impacted on stress levels and job satisfaction, for some leading to poorer mental health.

7.4.3.6 Q6 - What are the suggestions to promote the retention of faculty staff in higher education?

The last question that was posed to the participants was, 'Do you have any recommendations or suggestions to improve the retention of faculty staff in higher education?' Recommendations were identified under three themes: 'Recommendations relating to the individual', 'Recommendations relating to work environment' and 'Recommendations relating to the organisation'.

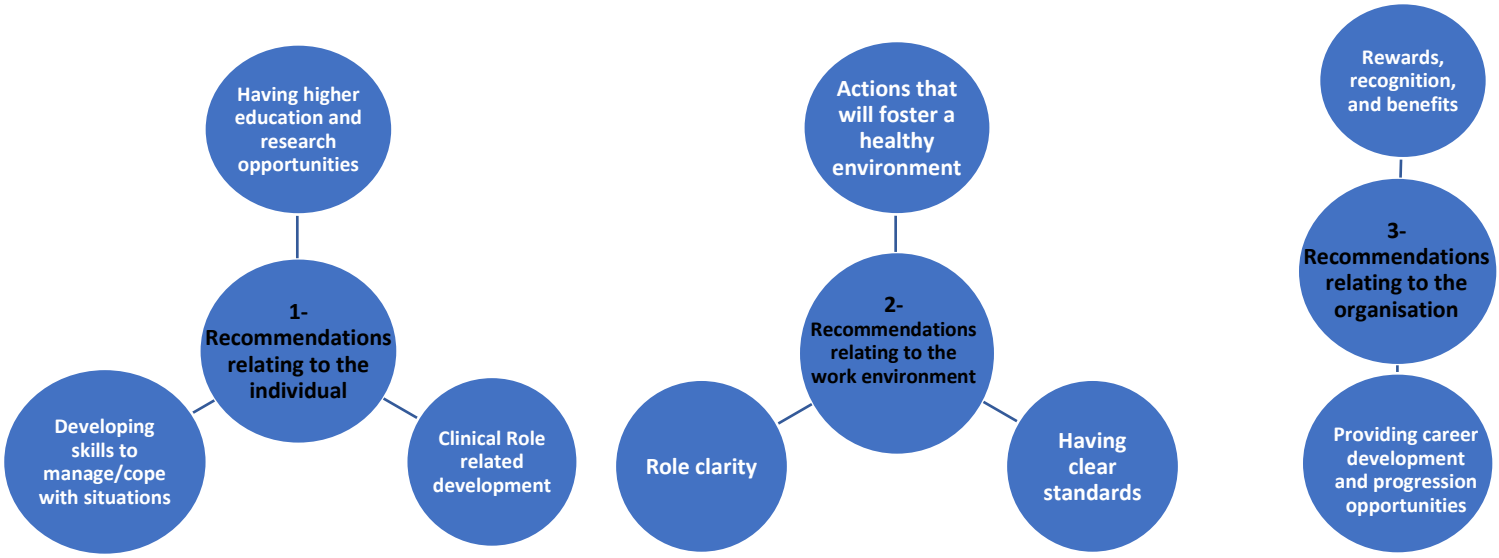


Figure 7.6: The Themes and Sub-themes of Q6

7.4.3.6.1 Theme 1: Recommendations Relating to Individuals

This theme encompasses recommendations that focused on development opportunities for individual faculty members. It includes three sub-themes: 'Having higher education and research opportunities', 'Clinical related development' and 'Developing personal skills to cope/manage with situations'.

Sub-theme: Having Higher Education and Research Opportunities

This sub-theme means having access to resources and opportunities that will encourage an individual to remain in the organisation. Participants identified that there was the need to improve national higher education in Saudi Arabia and ensure that national institutes were well equipped to handle the students' demands to continue their post-graduate studies. Even though it is a much wider point and one that requires in-depth exploration by junior staff, most post-graduate programmes are not available to students, and thus, they are frequently required to study in foreign countries to complete their Master's and PhD studies, particularly in the field of health. This is a pertinent point in this discussion, as Bahia stated:

"I think it's important to facilitate the higher education for the faculty who wants to continue their study." (Bahia, female, junior member of staff)

Several participants made the point that employees need to be offered the required opportunities, such as improved research environments, through providing supportive budgets for research, conference attendance, and other training programmes. Career development, such as providing avenues for continuing with individual research, was considered an important factor in ensuring the retention of academic staff. Dawood said:

"The thing that would improve remaining in the job is research support." (Dawood, male, senior member of staff)

Sub-theme: Clinical Role-related Development

This sub-theme relates to having sufficient opportunities to consolidate or revise clinical skills identified as relevant to their role. Participants made the point that, in order to teach effectively, it was important for them to keep up to date with the latest developments in the clinical field and to maintain their competence with clinical skills. This need for opportunities to maintain their clinical skills was discussed in detail by junior staff; they highlighted that one of their job description requirements was to train students the skills they would require to work in laboratories and hospitals. In contrast, senior staff did not raise this issue perhaps because they tend to work specifically with students on academic and research skills. Aisha stated:

"I think if they give us a chance to work in private after academic time, it may be helpful for us, because sometimes we focus on academia, we forget our skills, and when we go down with students to the clinical area, we feel like we want to teach them, but we are missing the skills that we had at the beginning of the year. So, we will improve our clinical skills and will improve our salary at the same time." (Aisha, female, junior member of staff)

Sub-theme: Developing Skills to Manage/Cope with Situations

This means helping an individual to develop their personal skills to enable them to deal with stress or challenging situations more effectively. Within all the focus groups, participants talked about how stress might be managed and about the importance of having the time and space to discuss situations that were challenging them. It was suggested by one senior staff member that,

in allowing for open discussions about stressors, there was the potential to address them and work towards reducing stress.

> "*They must have always and consistently and continuously open discussions about the stressors." (Ceren, female, senior member of staff)*

Participants acknowledged that some people were better able to cope with stress than others and suggested that individuals would benefit from opportunities to develop personal skills or strategies to manage a level of stress at work. Within the third focus group of senior female staff, emotional intelligence was identified as a key personal resource and a potentially supportive strategy for improving the overall status of an academic environment – that is, by promoting emotional intelligence amongst its employees, an organisation could improve the work environment and working relationships. This was summed up by Cellen:

> *"I recommend fostering emotional intelligence exercise in the workplace. That might be unfamiliar to many people. But I recommend that, this emotional intelligence exercise will give the space for the faculty members to be more open, to be creative, and to be socially and emotionally intelligent. So, the higher emotional intelligence in the work, the more cooperation and more healthy work environment need be fostered." (Cellen, female, senior member of staff)*

7.4.3.6.2 Theme 2: Recommendations Relating to the Work Environment

This theme encompasses recommendations aimed at creating and promoting a healthy atmosphere within the organisation as a means of positively impacting on employees' wellbeing, satisfaction and work performance. It includes three sub-themes: 'Actions that will foster a healthy environment', 'Having clear standards and systems' and 'Role clarity'.

Sub-theme: Actions that will Foster a Healthy Environment

This sub-theme refers to when managers and staff work together to promote a healthy work environment. Improving the work environment found greater resonance among the senior staff. There was consensus that the work environment must be one that fosters supportive and collaborative working without overburdening the faculty. Most staff recommended that working within a healthy, supportive environment contributed to intention to remain. Carema stated:

> *"The environment should be the one to make me to stay more, I mean, in the workplace. I think related to that; we should have a welcoming climate in our college." (Carema, female, senior member of staff)*

Good working relationships were also identified as important in making the working environment more comfortable and healthier, which plays a role in reducing stress, fostering partnerships and enabling collaborative working. As Ceren states:

> "*A healthy environment between colleagues and also between the manager and the faculties, or those responsible faculties.". (Ceren, female, senior member of staff)*

Sub-theme: Having Clear Standards and Systems

This sub-theme means ensuring that the standards and systems that underpin faculty appointments are robust and clear. This was an area discussed in most of the focus groups, with participants recommending that the existing career system needed to be reviewed. Areas of concern related to ensuring new appointees were only hired if they had the requisite qualifications, recommendations touched upon hiring, recruitment, practices, well laid out policies, restructuring of the rankings, and providing health insurance equitably, as well as the need for employment developmental programmes, as mentioned by Araina.

> *"The administrative system is important too; it needs to be improved by adding rules and regulations in order to manage the academic field more effectively." (Araina, female, junior member of staff)*

Two more nuanced recommendations came from senior international staff. The first related to the need for an extension to the length of contracts (all international candidates need their contracts renewed every two years), as stated by David:

> *"First, being a foreigner, being an expat here, maybe to increase years to stay here." (David, male, senior member of staff)*

The second recommendation was for work systems in Saudi Arabia to be reviewed in a way that took account of cultural and social requirements. Accordingly, cultural issues might be stressful factors for the staff, as mentioned by Dhari:

> "*I also would like her to consider the cultural factors, especially in Saudi Arabia, to put a recommendation in here for how cultural factors might influence remaining in the job, because, as you know, there's a female part and male part, whether being a female is influential to stay in the job or leave the job and so on. So, improving the conditions, as a whole improving the conditions for the workers is an influential factor." (Dhari, male, senior member of staff)*

Sub-theme: Role Clarity

This sub-theme relates to the need for all staff to have a clear understanding of the tasks, responsibilities, and processes at work. To improve the retention of academic staff, participants suggested that organisations needed improve role clarity by providing clear job descriptions for all employees. A lack of clarity pertaining to one's role, coupled with impromptu requests for additional tasks to be completed, was regarded by those present as having a negative impact on their health and intention to remain. This particular point found resonance among both junior and senior staff. Ceren explained:

> *"It's important to have a clear distribution of roles, very direct, very straightforward roles. If there are roles that have sub-roles or sub-divisions, they must be clearly distributed for the whole staff." (Ceren, female, senior member of staff.*

7.4.3.6.3 Theme 3: Recommendations Relating to the Organisation

This theme encompasses recommendations related to the processes that help organisations to reach greater efficiency by offering facilities for their employees to enhance their intention to remain in academia.

Sub-theme: Rewards, Recognition and Benefits

This sub-theme means the responsibilities of the organisation to provide a structured, consistent approach to offering rewards and benefits to their employees, and to recognising the contributions of their employees to the organisation.

Payment was discussed mostly by the junior staff members and not as much by the senior staff members. The point was made in both focus groups with junior staff that increasing and modifying salaries was necessary throughout the nursing profession because, although as employees they frequently work hard, they receive less payment in comparison to other health employees. Specifically, there were two interesting points raised here: the first was by Badria, who stated:

> *"When it comes to the financial support, we should consider giving higher salaries for the nursing faculty and have equal pay with other health specialties." (Badria, female, junior member of staff)*

Ariana, additionally, raised the need for more fundamental changes:

> *"There is a need to modify the salary scale." (Ariana, female, junior member of staff)*

In addition to monetary considerations, participants also highlighted the need to review benefits that were offered to the faculty. A comparison was made with other faculties that were noted to be receiving benefits or allowances that were denied to other staff. This was summed up by Badria:

> *"When it comes to the financial support, we should consider giving higher salaries for the nursing faculty and have equal pay with other health specialties, for example, the people who are at the faculty in medicine are getting a housing allowance and they're getting a higher clinical training allowance." (Badria, female, junior member of staff)*

Sub-theme: Providing Career Development and Progression Opportunities

This sub-theme relates to the importance of providing opportunities for staff development locally and internationally. The need for career opportunities generally was highlighted by junior

and senior staff but was given greater emphasis in the focus groups with senior staff. Senior staff discussed a range of opportunities that could usefully be offered by organisations to promote their employees' career development and progression to more senior posts. This included enabling employees to get more involved with research, to attend and present at local and international conferences, to undertake further formal study to attain higher degrees, and to attend local training programmes aimed at fostering personal and professional development. As Dhari said:

> *"Improving the conditions of the faculties is a pretty important factor, and also improving the opportunities of the faculties." (Dhari, male, senior member of staff)*

Regarding the suggestion to improve the intention to remain in Saudi higher education, the participants across all the focus group highlighted essential recommendations that were classified as personal recommendations, having opportunities, developing the clinical roles, and focusing on developing personal skills and personal abilities such as emotional intelligence and social competencies, and how to manage stress. Most participants agreed that the work environment and organisational development were the essentials concerning intention to remain in Saudi higher education, such as offering a healthy work environment, clear standards, roles and systems, as well as good payment, rewards and benefits.

In conclusion, both junior and senior staff members were able to offer a number of suggestions to promote the retention of faculty staff in higher education. Senior staff members were able, however, to offer a broader range of suggestions that would impact at individual, environmental and organisational levels, whereas junior staff tended to focus on suggestions that would foster skill development for the individual and the improvement of organisational resources.

7.5 Strengths and Limitations

This qualitative phase has some strengths and limitations. The strengths were, dividing the participants into groups were comprising senior and junior staff members. This was deliberate to encourage discussion and avoid any barriers where they could have felt hesitant to share their opinions in front of senior staff or vice versa. Conducting online focus group meetings has been another strength of this research. It allowed the inclusion of a male group, included both Saudi and non-Saudi participants, was convenient for most participants, and was a solution for the COVID-19 restrictions. It also saved a substantial amount of time and the challenges of travelling. The language might be considered one of the limitations. The focus group discussions were conducted in English only. However, Arabic was the native language of most of the participants, and therefore it is possible that some of the language nuances may have been misinterpreted and important discussion points missed. Discussion in the Arabic language might have given the participants more confidence to express and explain their arguments more deeply. The online approach also offered certain limitations. In online discussions, the interaction between the participants was very limited, as each one waited in turn to speak. It is challenging also to evaluate the non-verbal clues and behavioural expressions of the participants while online, and this was particularly difficult when participants engaged in audio discussion only.

7.6 Conclusion

This chapter discusses Phase Four, the qualitative study, which seeks to explain key results from Phase Three. This chapter emphasised on how well the focus groups findings contributed to the understanding of the quantitative findings. Participant recruitment worked well, and four online focus groups were conducted and included both senior and junior staff members from two Colleges of Nursing in the Kingdom of Saudi Arabia; both female and male participants were recruited. The focus group data were analysed using thematic analysis based on the Braun and Clarke (2006) framework. In particular, this qualitative phase helped explain the influence of gender, nationality and culture on the ITR in a way that the survey alone did not achieve.

The four focus group sessions were conducted and managed successfully by the researcher using an online approach; this was necessary because of the current pandemic. This online approach presented challenges and advantages. Challenges included having to provide additional

written instruction in relation to the technical requirements of online focus groups prior to the focus group and, during the focus groups, group interactions were at times problematic to facilitate for the researcher because a number of participants did not use the video facility. However, the main advantage of an online approach was that it enabled the researcher to recruit a focus group with male faculty members; for cultural reasons, this would not have been possible if face-to-face focus groups had been conducted. Data was generated using a topic guide based on the results from the cross-sectional survey.

A range of themes and subthemes were identified and these related mainly to cultural and gender issues, as well as pertaining to the individual, the organization as well as the work environment. The influences of gender, culture and society underscored nearly all of the discussions and were highlighted as factors that determine and influence intention to remain. Differences between Saudi and non-Saudi staff were explained by differences in contractual arrangements, rewards and benefits, and social responsibilities. In particular, societal views in relation to mental health, and the potential stigma associated with seeking help with mental health, were highlighted as integral to Saudi employees' reluctance to seek help and thus potentiate mental health problems. Hence, one's environment and societal context play a pivotal role in their professional life and interactions.

Multiple factors contribute to the high turnover rate and lack of retention of faculty members in Saudi HEIs and, consequently, the range of suggestions from participants about how to address intention to remain was varied; many suggestions were focused at organisational level changes. Key to this was investing in the person, through offering a range of resources and opportunities to promote career development along with helping them to develop the necessary skills to cope with, and manage, the working environment. Whilst influencing individuals' personal attributes, and enacting societal and culture changes takes time, organisational changes may occur over shorter time periods and may, therefore offer a first step towards facilitating intention to remain. However, addressing all of these factors should yield longer term results that have the potential to influence and encourage retention among nursing faculty in higher education institutions in Saudi in a more sustained and holistic way.

Chapter Eight - Discussion and Recommendations

8.1 Overview and Summary of Study

This chapter critically presents the findings of this PhD study from all four phases of the study. The chapter highlights how the initial thoughts about emotional intelligence and job satisfaction informed the main study, and how these related to the study findings. A mixed methods design following Creswell's (2011) approach is discussed, along with how this approach was integrated across all levels of the study. In particular, how this was achieved at the data analysis level using qualitative focus groups to interpret the cross-sectional study results to help further understanding of the study problem, will be discussed within the context of contemporary literature. In addition, the alignment of focus group findings with the underpinning JD-R model variables will be discussed. The strengths and limitations of the study will be presented, followed by a conclusion. Finally, recommendations for future research and how findings might influence staff retention within Saudi Colleges of Nursing are presented.

This study was carried out in four phases of an explanatory, sequential mixed method design in order to identify the personal and work environment characteristics associated with the organisational outcome of intention to remain in Saudi higher education, Colleges of Nursing. The first phase consisted of two scoping reviews and a systematic review. The second phase, a pilot study including cognitive and pilot testing were performed to test participant recruitment strategies, participants' understanding of questionnaires and applicaplity of the questionnaires in Saudi contexts. The third phase was a cross-sectional survey, conducted to test the underpinning theoretical model, and its associated variables that emerged from the systematic review and how these might explain intention to remain within the Saudi context. The fourth phase used focus groups to explain the cross-sectional survey results, identify factors not included in the survey, and identify potential interventions to improve intention to remain in Saudi higher education.

8.2 Emotional Intelligence (EI) and Job Satisfaction (JS)

The researcher's initial thoughts were that EI and JS were two key factors that might influence the study problem of staff recruitment and retention in Saudi Arabia. To understand these concepts better, two scoping reviews were conducted using a defined approach and suggested that these were indeed important factors. There was evidence that emotional intelligence predicts job satisfaction (Sulemen, 2020; Lee and Ok, 2012; Mousavi et al., 2012; Trevellet et al., 2013). It clearly shows that emotional intelligence is directly related to job satisfaction; that people with higher emotional intelligence report higher levels of job satisfaction (Suleman et al., 2020; Alnidawy, 2015). One explanation for this may be in how emotionally intelligent employees deal with stressful conditions to reduce negative consequences. The opposite is also the case, and people with less emotional intelligence are not as able to manage and handle stressful situations thus resulting in dissatisfaction (Tagoe & Quarshie, 2016; Yusoff et al., 2016).

Although EI was defined from different perspectives, there was agreement that it is about understanding, applying, utilising, and managing emotions - one's own and others (Mayer, 2014). EI may be viewed an important personal resource or characteristic that can be learned and acquired which may lead to positive emotional and organisational outcomes in most fields of work. EI could be fostered in education to increase self-esteem, help in managing stress and conflict, enhance productivity, and engagement, all of which may lead to an increase in job satisfaction (Stein et al., 2009; Parker et al., 2004).

Job satisfaction was defined as personal (emotional) or organisational outcomes, and perceived and used differently depending on purpose. Certain definitions of job satisfaction were related to emotions or feelings or attitudes, or it could be that satisfaction is a feeling of effective responses to facets of a situation. It is essentially how an individual appraises their job in terms of satisfaction or dissatisfaction. Job satisfaction has been used in research in a number of ways, including as a positive individual outcome applied in the JD-R model in the positive or motivational pathway or as an organisational outcome when linked to productivity. In this study job *dis*satisfaction was used as a stress outcome to evaluate personal emotional reactions as a consequence of job demands, thus representing the negative pathway of the JD-R model.

In this study, although the direct relationship between EI and JS was not tested (the two distinct pathways were), in the quantitative phase, participants demonstrated high emotional intelligence and generally were satisfied with their jobs, apart from one aspect (promotion). What the study did demonstrate was an interaction effect of EI between job demands and JS i.e. it buffered or protected against the negative consequences from job demands (Yusoff et al., 2016). This may in part explain the lack of prediction of the negative pathway i.e., stress outcomes on intention to remain, and if JS had been operationalised as a positive or motivational outcome, findings may have been different. This reflects the complexity of this whole field.

Emotional intelligence was highlighted also in the focus group discussions, and participants supported and explained the importance of EI as a personal resource. Both junior and senior participants suggested that developing EI would help staff to cope better with stress. Additionally, senior staff suggested that using personal skills such as optimisms and enjoying work which are elements of EI, would also reduce burnout and exhaustion (Lee, 2018) and enhance wellbeing and satisfaction. Moreover, the senior participants suggested fostering EI could also improve ITR.

In summary, the researcher's initial notions of EI and JS as important factors were challenged throughout the study. Both emerged as important although this relationship needs to be tested further. Whilst the scoping reviews established the potential importance of EI and JS, other factors were identified that may also be important. Therefore, a systematic review was performed to identify the personal and work-based factors that may aid in examining the intention to remain. Findings from this review informed the subsequent study phases through identification of an appropriate work-related stress model – Job Demand-Resources and a range of additional variables. What was clear from all the reviews was that this literature mainly related to Western cultures, with limited studies in the Middle and a significant gap in the Saudi context.

8.3 Why and How the Mixed Methods Design was used to Integrate the Quantitative and Qualitative Results

To address this gap using quantitative design alone would give numerical and statistical association between the variables but would not give the necessary interpretation and understanding, specifically in a Saudi context. Therefore, a sequential explanatory mixed method

approach (QUANT-qual) (Creswell, 2011) was used to enrich the benefits of both quantitative and qualitative methods. A quantitative cross-sectional study was the first element, followed by a range of statistical analyses, the results of which informed an interview guide for the qualitative element (focus groups). The latter were used to explain specific quantitative results that were unclear, or surprising.

An important element in Creswell's approach is how both quantitative and qualitative elements are integrated. The integration between quantitative and qualitative results was performed at three levels: at study design level, method level, and in interpretation and reporting level. In the design level was achieved by using research questions that necessitated using both quantitative and qualitative methods. Integration at the methods level was achieved by recruiting focus group participants from two colleges of nursing who had participated in the cross-sectional survey and using results from the quantitative analysis to inform the focus group questions. At the level of interpretation, key quantitative findings were presented to the focus group participants as the main discussion points. Integration of interpretation was performed in this study by bring the two results together in one report, and how well this was achieved is discussed later in this chapter.

The pragmatic approach was selected as workable to allow integration of both the quantitative (positivism) and qualitative (interpretivism) elements together. Some research questions in this study were answered by a positivism approach such as RQ's 1 to 4, and others such as RQ's 5-6 by interpretivism. Therefore, the pragmatic approach was an applicable approach to focus on and address all the research questions.

8.4 How the Focus Group Questions Interpreted and Integrate with the Cross-sectional Survey Results through answering the research questions: (integration in interpretation and reporting level)

The first research question (RQ1) was: *To what extent do the demographic characteristics of nursing faculties influence the stress outcomes, work engagement and intention to remain*?

This question was addressed primarily in the cross-sectional study, but findings were discussed in the focus groups. In the cross-sectional study, there were four demographic characteristics that influenced the outcomes. There were, age (older participants were more engaged), gender (being female predicted greater emotional exhaustion and less job satisfaction),

nationality (being Saudi predicted poorer mental well-being), and experience (those who had been in academia for longer had less burnout, greater job satisfaction and were more likely to stay in their current job). Interestingly, culture was not assessed in the cross-sectional study, but the focus group participants identified this as an important issue in the Saudi context.

One third of the participants were male and they reported less burnout (emotional exhaustion) than women and were more satisfied with certain aspects of job satisfaction. These were people (e.g. stimulating, boring, helpful), work (e.g. routine, satisfying boring, good, respected) and supervision (e.g. supportive, hard to please, poor planner, annoying). These relations with gender persisted in the multivariate analysis, indicating its independent association with these outcomes regardless of other factors. Concerning female gender as a significant independent predictor of higher burnout and lower job satisfaction, there are a number of explanations.

Over the course of the focus group discussions, when participants were asked to give explanation of this cross-sectional result about these gender issues, the reasons for this were found to be both varied and complex. According to the focus group participants, these reasons may be classified into two main themes: cultural influences, and responsibilities. Both women and men in the focus groups referred mainly to the cultural reasons as the Saudi culture has a major in influence in this context, but the women were more interested in the finding as most of them faced this exhaustion. Women in focus group tried to explain how they struggle to empower themselves in their work and achieve their goals. Women identified that they are more meticulous and strive to be perfect in their work. However, this struggle may also lead to frustration and dissatisfaction. Another potential explanation may be that women are viewed as more prone to exhaustion or being less satisfied and this is attributed to societal perceptions of women as being expected to feel more exhausted (Purvanova & Muros, 2010; Zou, 2015).

Male participants also shared their reasons freely; it might be because all the men were in one focus group that enabled them to discuss their views comfortably, and re-iterated that women have higher standards and expectations than them. Women strive for perfection, with high standards and quality of work, they are meticulous and do not settle for average work. This was suggested by three male group participants. Both female and male participants highlighted the

eastern culture influence of how men are more dominant and benefit for having more privileges and position in their job as faculty. This makes it easier for them than women.

Women in KSA face challenges in pursuit of careers outside the homes, in comparison with their accepted roles as mothers, and wives. The cultural and social expectations about the ability and expectations of women in working outside home, puts an additional burden on the women. This leads to a struggle to demonstrate ability to achieve high quality and perfection. In addition, Saudi women have less opportunities to find a job and usually occupy lower positions than men. This also give explanation why males in Saudi context are seen as more flexible, as men have position and therefore invest less effort. All these reasons drive the women to be easily exhausted and less satisfied by work (Al-Asfour & Khan, 2014).

Both genders highlighted that the women struggle to manage multiple responsibilities. Even within the home, they face the demands of playing different roles – wife, mother and daughter. These, coupled with demands at work, were bound to cause increased exhaustion. Senior members agreed this mainly than junior might be senior handle more responsibility as most of them are married and have children.

Women's roles in society have traditionally meant they have sole responsibility for the family and home and having a job is simply an extra responsibility (Zou, 2015). This notion predominated in the West has largely changed but with no real change in these domestic responsibilities because of their biological and psychological nature. Women are more empathy and caring person that impact to feel more responsible and keener to take care of her children and family members (Kalva & Shiryayev, 2016).

Females also are less likely to be able to work flexibly and often struggle to balance work, home, and family responsibilities (Emmerik & Euwema, 2001; Sliskovic & Servic, 2011). Existing literature shows that job satisfaction among women is poor across various cultures, sectors (Zou, 2015), and countries (Purvanova & Muros, 2010). A range of international studies have found that females tend to report more stress and burnout and are less satisfied in their work as they occupy lower positions than male faculty members (Emmerik & Euwema, 2001; Marchand et al., 2018; Street and Dardis, 2018). The balance of females' life roles within the family and home have consistently emerged as contributors to burnout and stress (O'Laughlin & Bischoff,

2005). This challenge regards the women in work is not restricted to the Middle East. Western Europe women still take care of their households and their children more than men, even though women work full time; thus, stress levels at work increase more in females compared to males (Brough et al., 2014). An Iranian study suggested that this gender difference can be explained not by social status alone, but it could be due physiological differences between women and men (Madadzadeh et al., 2018).

While this is an international finding, there are specific influences on this result from a Saudi cultural perspective. Women in the Kingdom face these similar challenges of balancing a working life with their family and societal responsibilities, and this is supported by a study in a Saudi setting (Al-Asfour and Khan, 2014), who reiterated that women face the added challenges in pursuing careers outside the homes because of the value upon their roles as homemakers, mothers, and wives. Thus, cultural values and social expectations hinder their advancement and increase their stress. There were some specific cultural influences within the Kingdom, but women's societal roles and responsibilities coupled with poorer career opportunities were seen to be the main contributing factors to this cross-sectional finding.

The literature points to several explanations of how gender and culture influence the level of satisfaction in the workplace. It might be due to the fact that men and women have different perceptions on what they seek to gain from a job and this in turn shapes how they view and report their level of job satisfaction (Clark,1997). It may be that men might have different aims from women for example salary may be a main goal; their aim hence, men are more satisfied (Emmerik & Euwema, 2001).

Across many different cultures, women are shown to be more likely to be dissatisfied by work. In the European culture, women report a low level of job satisfaction compared to men, might be due to salary differentials where women are paid less than men (Aydin et al.,2012). Women also may have lower expectations from work and income may contribute to their low levels of satisfaction (Bonte and Krabel, 2014). In other contexts, a study conducted among Chinese retail workers longer working hours contributed to female employees reporting less job satisfaction compared to their male colleagues (Huang & Gamble, 2015). JS may be viewed

therefore as contextual and related to social norms and culture (Huang & Gamble, 2015; Marchand et al., 2018).

In Saudi contexts, despite Saudi women becoming more aware of their rights, and improved access to education, economic opportunities, and participation in the community, job opportunities to work are still constricted for women in Saudi Arabia. This means that women in Saudi Arabia who are well educated at times remain unemployed (Omair 2010; Al Ahamadi ,2011). This might best be explained by cultural issues and social norms. The Saudi Arabian culture still does not fully accept for the notion of women being in employment as they are supposed to be mothers and wives as their main role in the community. Also, the religious issue of required separation between women and men in the workplace remains challenging, even in contexts such as healthcare where they are required to work together. In addition, the concept of men being supervised by women in the workplace remains problematic; lack of acceptance of this situation in Saudi culture results in women feeling dissatisfied with unequal work opportunities. Women's family responsibilities were found to be another major concern in Saudi contexts that impacts on the Saudi women as they may be unable to take on full time work but there is a lack of part time employment opportunities (Alluhidan et al.,2020).

However, there is significant cultural change happening in Saudi. Recently with the Saudi 2030 vision there is increasing focus on empowering Saudi women outside the home. Women now are enrolled in all job sectors, and hold higher positions, to allow them to contribute to the 2030 vision goals. These reforms also influence social life and women apart from their involvement in the workforce, are driving cars, and are more independent in travelling (Aljohani, 2020). Recently in 2021 women were appointed to positions in the Kingdom's armed forces and these included leadership roles. All these changes will enhance the Saudi women satisfaction and improve the culture restriction.

The effect of participants' nationality was also examined, and this data presented as Saudi or non-Saudi. Quantitative findings demonstrated that non-Saudi participants had less burnout and had greater job satisfaction in regard to their work, pay and supervision when compared to Saudi participants. Non-Saudis also reported being more engaged and had higher levels of mental wellbeing. This result is in support of an earlier local study in King Faisal University, Damman

City (Al-Rubaish & Wosornu, 2009). A potential explanation suggested in the literature for this may be the socio-cultural, environmental, and job-related factors, such as in relation to social commitment and home atmosphere. Also, the non-Saudi staff members have good opportunities for good scales of payment in comparison to the payment in their countries; while they are supported by free accommodation and transportation as well (Al-Rubaish & Wosornu, 2009). This was discussed at length in the focus groups.

Across all the focus groups participants discussed this issue of the difference between Saudi and Saudi nationals and offered explanations that related to culture and work-related factors. In relation to mental health, junior participants suggested that stigma for seeking for mental help in Saudi Arabia contributed to poorer mental health among Saudi nationals. This stigma may be related to Saudi culture as cultural norms, social constructs and stigma around mental health play a crucial role in how mental health is viewed, understood and consequently treated or addressed. This was particularly true for Saudi participants (Alamri, 2016). Saudis are more reluctant or less able to access mental health support than non-Saudis. as within this society anyone visiting a mental health centre is viewed as a not stable person. Therefore, the people in Saudi struggle when facing any mental health issue.

Other cultural differences between Saudis and non-Saudis were highlighted in the focus group discussions, including the wider demands of social and family commitments that tend be experienced by Saudis. Saudi citizens have extra social commitments to their relatives, families and communities that need to be fulfilled, with giving additional social load in addition to the workload. In contrast the non-Saudi are usually without their families and therefore have reduced day to day responsibilities (Al-Rubaish & Wosornu, 2009).

Participants also supported the premise that non-Saudis receive benefits more than Saudi. This issue was discussed by all nationalities across the focus groups. A range of benefits including accommodation, teaching allowance, health insurance, free travelling, and transportation are offered to non-Saudis. One Saudi study found that it is the rewards, benefits and opportunities offered to non-Saudis, that encourage them to work in the Kingdom and these may therefore enhance their mental wellbeing (Al-Rubaish & Wosornu, 2009. Non-Saudi's nationals tend to have higher qualifications than Saudi faculty members, and this may mean they are better able to

handle situations and control negative emotions, subsequently increase their mental wellbeing, work engagement and commitment (Al-Rubaish & Wosornu, 2009).

Job security also was mentioned. Non-Saudis are employed under fixed term contracts, and they work for defined purposes, so they can concentrate on their jobs, which are highly task oriented. This may contribute to feeling secure and satisfied by achieving their target tasks. However, it was interesting that the notion that being on a fixed-term contract was seen as a benefit rather than as something that could add to a non-Saudi's stress. In many situations, the lack of ongoing job security would be seen as a stressor but in this study, it was seen as removing some of the pressures. The discussion around Saudi nationals was also interesting. For some, Saudi nationals were stressed and challenged to cope with work situations, because they were just not used to working hard, and used to easy jobs. However, in contrast, some felt that the Saudis were working in a competitive environment, where only they could apply for key senior positions, and that increased their stress.

In conclusion, the interesting issue that needs to be studied, improved and solved was the social stigma among those needing and seeking mental help. This issue is still challenging and is a barrier to improving mental health in the Saudi context, which might give a logical justification for the results of this study where there is low mental health among Saudi faculty members compared to other nationalities. This stigma was not related to uneducated people, but it was highly influenced in an academic environment (Abolfotouh et al., 2019).

In the quantitative study, nursing faculties' experience and age were demographic factors with some impact upon their stress outcomes. Older participants and those with longer experience in academia reported less emotional exhaustion and cynicism, but better mental health and more engagement in their work. In the multivariate analysis, only participants' age was identified as a significant independent predictor of more engagement. This might be because with age comes increased proficiency in dealing with stressors, and increased resilience which might result in being able to buffer the negative consequences of work conditions (Yeung & Fung, 2012; Carri & Stafford, 2018; Jason et al., 2017). Moreover, older people often tend to maintain their mental stability and positive thinking and avoid detrimental arguments at work environments in

comparison to younger colleagues (Hsu, 2019). This could consequently help in promoting their engagement at work.

Those with longer experience also were more satisfied with aspects of work (e.g., routine), and this might be explained by better career status and more control within their working environment. They are likely to be more involved in decision making, curriculum design, committees and have leadership and governance roles (Pressley, 2017). Moreover, longer experience in academia could increase a person's flexibility in dealing with conflicts at work, with consequently better engagement, and more tendency to remain in academia (Listau & Innstrand, 2017). Similar findings have been previously reported and they were attributed higher aspirations, expectations, fulfilment, achievement, self-esteem, emotional regulations, and communication skills among senior faculty members, with more ability to manage their emotions (Demirtas, 2010; Msuya, 2016; Shrestha, 2019). This may in part explain the greater engagement and the increased likelihood to remain in the organisation (Pan et al., 2015: Msuya, 2016)

The second research question (RQ2) was: *How are Western conceptualised job demands, job resources and personal resources understood in nursing faculties in HEs within Saudi Arabia?*

This question was addressed in the quantitative phase by the response and completion rates, patterns and missing items, and tested the reliability of the questionnaires and the time to complete the questionnaires. The high response rate and completion rate with low missing items and high reliability with acceptable time to complete the questionnaires suggest that the questionnaires appear to have been understood and applicable to participants in a Saudi context (Barrett & Shumate, 2006). The pattern of missing items was random, while the number of those missing items was very low with a range of between 0.01 and 0.07%. Most participants completed the questionnaires in 10-60 minutes, as the anticipated time had been from 30-60 minutes. All the scales and subscales demonstrated an accepted internal consistency of a Cronbach alpha >0.7 (Nunnally, 1978; Keyton, 2001).

The third research question (RQ3) was: *Which personal characteristics, job demands, job resources and personal resources predict or are associated with a) stress outcomes (the negative arm of the JD-R model); b) Work engagement and commitment (the positive arm of the JD-R model).*

This research question was addressed by identifying the significant correlations between job demand, job resources and personal resources with: a) stress outcomes (Burnout MBI-mental wellbeing WEMBS, job satisfaction JDI) as the negative arm; and b) work engagement UWES and commitment as positive outcomes. Multiple regression analyses were conducted to identify which personal and professional characteristics, job demand, job resources and personal resources predict the negative and positive JD-R arms variables. In addition, the focus group discussions were used to explain some unclear or surprising results for this question.

Hierarchal multiple stepwise regressions analyses were used to verify the relations among the components of the JD-R negative arm. The stress outcome variables were namely burnout with its three dimensions, in addition to mental wellbeing and job satisfaction variables, and job demands accounted for 32.4%, 24.1% 28.8%, 22.0% and 20% of the explained variance respectively. There may therefore be variables that this study did not measure and may emerge from the focus groups. The findings identified role conflict as a job demand variable that consistently influenced all the stress outcomes, and this was discussed also at length in the focus groups. Role conflict was conceptualised in this study as unclear content roles of task and receiving contradictory instructions. High role conflict predicted and was associated with increases in all three burnout dimensions, and with reduced wellbeing and decreased job satisfaction. Therefore, role conflict could be considered as a major job demand factor influencing job stress outcomes. The finding is quite plausible given the untoward consequences of role conflict on the work relationships with peers as well as with supervisors and other faculty members. Additionally, it might have an adverse impact on the work outcomes. The finding is in line with a number of studies in the literature which identified a significant direct relationship between role conflict and burnout (Jacobs et al., 2012; Konstantinou et al. 2018; Dall'Ora et al., 2020). The effect of role conflict might be explained by its associated role ambiguity and unclarity, which could intensify burnout (Wu et al., 2019), and consequently decrease employee's job satisfaction (Lourel et al., 2009).

Emotional workload as a job demand was conceptualised in this study as when work puts the individual in personally and emotionally upsetting situations, and this emerged as a significant independent predictor of higher scores of exhaustions and cynicism burnout dimensions. The role of academic staff in university has seen profound changes in recent years, to includes a lot of

demands beside teaching, such as publishing load, supervision and administrative work without looking to their exhaustion and mental health. Workload is not limited to physical effort and time stress also includes the emotional and mental load specifically associated with a nature of academic work that subsequently drives them to experience burnout (Pace & Sciotto, 2021). The increases in burnout levels are likely to have a negative impact on job by increasing turnover (Dall'Ora et al., 2020).

Quantitative findings additionally revealed that high pace and amount of work was a significant independent predictor of high exhaustion and cynicism burnout dimensions. Hence, its effect is very similar to that of emotional workload, which indicates that both the high emotional and physical workloads have a negative impact on job stress outcomes. Previous studies also report a significant relationship between high workload and burnout, particularly the emotional exhaustion and cynicism or depersonalization dimensions (Van Bogaert et al., 2013; Galletta et al., 2016; Konstantinou et al., 2018; Pieters & Matheus, 2020). These findings suggest that improving role clarity, reducing emotional workload and providing emotional support, and reducing the pace and amount of work could help in decreasing burnout (Konstantinou et al., 2018).

Unexpectedly, high mental workload was associated with and led to less burnout in the two dimensions (cynicism (MBI-CY), professional efficacy (MBI-PE)). Additionally, the high mental workload was found to be associated and led better mental wellbeing. Mental workload was conceptualised in this study as thinking about precision, being preoccupied by carefulness, keeping continual attention, and over thinking work. These findings are contrary to Janssen et al. (1999) found that a high level of mental workload was a predictor of the emotional exhaustion dimension of burnout. This disagreement might be attributed to differences in the study settings, and the associated differences in what a person perceives as a challenging mental work demand or a hindering demand (Bakker & Sanz-Vergel, 2013). It might also be explained in how a person views their workload and whether it is ‘manageable’ or not (Lewis and Cunningham, 2006). Therefore, it was very important to explore this in the focus groups.

For some participants this survey result was surprising, however, through the discussions, participants offered some possible explanations, although not all were directly related to the

relationship between mental workload and the stress outcomes. The key themes from these explanations were personal skills and characteristics (which included optimism and enjoying work, and a sense of achievement, and experience); and work environment factors (which included role clarity, nature of the work, workload, and challenges).

There were no major differences in response to this question between junior and senior staff, nor in relation to gender and nationality. The only obvious difference was that optimism and enjoying work was offered as an explanation only by senior staff; this may be because, owing to their length of experience in academia, they were themselves more satisfied with their roles and optimistic about the future. A good explanation for this is that positive feelings and happiness, and positive thinking, have the potential to stimulate individuals to concentrate and focus on accomplishing work tasks, which in turn contributes to reducing the level of work burnout and enhancing wellbeing (Moloney et al., 2018). Of note, with regards to the EI scoping review, optimism is considered of one aspect of EI, based on the definition of Trait EI (Petrides, 2009) as well as the Bar-On EI model (Bar-on, 2006). This aligns with the findings of a recent Saudi study which reported that nursing staff had a high level of EI and that empowered them and improved their psychological and mental health in their work (Alotaibi& Winterton, 2020).

Participants linked the personal characteristics of being optimistic with their sense of achievement. People who have a positive view of the future can concentrate on their tasks, as well as enjoying their achievement, which enhances their mental health and wellbeing (Méndez, Martínez-Ramón, Ruiz-Esteban & García-Fernández, 2020). Participants also suggested that experience was a contributing factor, and it may be that experienced teaching staff members have the skills and the ability to be focused and concentrated at work and to cope with stressors better and therefore exhibit lower rates of burnout (Méndez, Martínez-Ramón, Ruiz-Esteban & García-Fernández, 2020).

Across all the focus group, majority of participants based their justification on work environment reasons, and the most common response was that burnout may stem from a sense of boredom and a lack of clarity of roles. Similarly, role clarity emerged as one of the most frequent predictors of work-related stress in the cross-sectional study. Role conflict was strongly predicted greater burnout and poorer metal wellbeing. Participants reported that giving them different

unclear roles during their work that lead distract their concentration on work that led to increase their burnout. One study in Saudi context support that as the high burnout among faculties in higher education institutions has been linked with turning education into a business, with the increasing demands and loads, and being given distracting and unclear tasks without the corresponding salaries and benefits (Al Serhan & Houjeir, 2020).

Several work environment factors play a role in reducing stress and thereby prevent burnout (Altun, 2002). Many of the participants suggested that it is not only the amount of work or the job itself, but how this is perceived by the individual, and this may also offer an explanation regarding mental workload. Workload itself emerged as an important subtheme, but not simply as a negative thing. Job demands can be perceived as a 'hindrance' or a 'challenge' (Bakker & Demerouti, 2017). Hindrance job demands are defined as when a job demand leads to undesirable consequences that interfere with a person's goals, i.e., role conflict. In contrast, challenging job demands are defined as when a job demand potentially promotes an achievement of the employee. Examples of challenge stressors are high levels of workload (physical, mental, emotional) and responsibility (Bakker & Demerouti, 2017). Therefore, a workload of mental concentration may be considered a "good" stressor in this study. In addition, some participants related their explanation to the nature of their work. The nature of academic work requires more mental than physical effort (Ventura et al., 2019). Academic staff members need to do more mental effort, concentration, attention in teaching and research work in order to achieve the successful outcomes, which impact positively on their satisfaction and metal wellbeing, rather than for non-academics, who require minimum mental effort to perform their work (Omolayo & Omole, 2013). Therefore, academics are used to using mental effort such as concentrating and cognitive skills to focus. This in turn may enhance their mental health so that they feel less burnout and more satisfied with their accomplishments and can concentrate at work (Kabito et al., 2020). The conclusion of the explanation of this survey surprised results can be classified in main two reasons: a personal skill and characteristics and (which included optimism and enjoying work, and a sense of achievement, and experience); and work environment factors (which included role clarity, nature of the work, workload, and challenges). This explanation supported also by the EI scoping review, and also contributes to our understanding of the cross-sectional results.

For more exploring of coping and manging with the consequences of job demands and stressors generally, participants in focus group asked about what contributes to the way individuals react to stress and manage their stress**.** The participants from the focus groups agreed on some key points and offered suggestions as to how to cope better with stress. These were categorized into key themes that were: individual factors or personal characteristics (which included individual characteristics and coping mechanisms, and personal experience); personal and professional support systems (including personal, social and professional support). The focus of the discussions within all the focus groups was explaining what enabled some people to cope better with stress than others. In doing so, junior and senior staff identified emotional intelligence, either directly by name or by describing associated attributes, as a key contributor to individuals coping better with stress. In addition, across the focus groups, several female staff members highlighted that being able to express how they were feeling, albeit that these were negative emotions, was valuable in terms of helping them find a resolution to the challenges they faced. There was some suggestion from senior staff that as they got older, they had more experiences to draw on and that helped them cope better with stress. This aligns with evidence in the literature that suggests more experience of stressful situations enables individuals to cope better in challenging situations and build healthy coping strategies and that this in turn leads to better engagement with work (Yeung and Fung, 2012; Carri and Stafford, 2018).

In the context of coping with stress, research suggests connections between an individual's personality characteristics, the support systems available to them, and how they may respond to stress (Leandro & Castillo, 2010). Therefore, one's personality or individual characteristic is also likely to guide the coping strategies adopted by them, as well as how effective such a strategy might be. This provides insights into why people may respond to stress differently. Additionally, an individual's personality shapes their reactions and that of others in situations that may prove to be stressful and, ultimately, determines what they perceive as stressful (Yu et al., 2020). This is supported by to the results of the EI scoping review which identified that EI may be defined as trait (Petrides, 2009).

Job and personal resources predicted work engagement accounting for 33.2% of the variance and commitment accounting for 47.5% of the variance. Pay, as a job resource, was identified as a significant independent predictor of more commitment. It was also a significant

independent predictor of better work engagement. Payment has been conceptualised in the past as a bonus or reward besides a set salary, but in the current study the payment reflects a sufficient salary to live comfortably. Payment is indicator of a motivational factor to enhance work engagement and commitment. Insufficient pay and unfair rewards were found to be associated with low levels of engagement (Shamian et al., 2002) and commitment (Leiter & Maslach, 2009) Such decrease in these resources would certainly have a negative impact on an employee's work engagement and organisational commitment.

A beneficial effect of career development and support as a job resource on nursing faculties' commitment to their workplace was also demonstrated. High career development and support predicted greater commitment. The result is quite expected given that nursing education is a profession that depends on continuing education and professional development. Thus, a work organisation offering staff development and educational opportunities and sufficient career development possibilities would be more attractive to nursing faculties, which would increase their organisational commitment. The finding is in support with previous research in Nigeria, which demonstrated that clear and adequate career development opportunities have a significant positive influence on employee's organisational commitment (Ogaboh et al., 2010).

Another job resource identified as a significant independent predictor of more commitment was the good relationships with colleagues. This result highlights the importance of good work relations among peers and other faculty members in fostering organisational commitment through increasing the feelings of belonging to the setting. Supportive work colleagues may help an individual handle work tasks and help create an inspired atmosphere. It is actually a part of the social support the employee gets at work and that has a beneficial effect on his/her wellbeing and consequently on commitment to work (Kiema-Junes et al., 2020). A study in Canada by Gellatly et al. (2014) investigating the factors influencing organisational commitment among registered nurses, demonstrated that work unit relations were shown to have significant positive influence on employees' affective and normative commitment. Additionally, low overall commitment was associated with poor work relations and unsupportive colleagues.

To conclude the influence of job resources, three main elements (pay, career development, relationship with colleagues) have influence on the motivational outcomes of commitment and

work engement. Good pay, high career development, better relationship with colleagues appeared to highly predict commitment, while good payment predicted greater engagement. Focus group participants in each focus group were asked to discuss why these resources had emerged as important predictors of work engagement and commitment.

All the participants in focus groups including junior and senior staff, across all the nationalities involved in the study, agreed with the results from the survey and offered explanations for this result. The key reasons were captured in themes of appreciation and self-worth, sense of security, and motivation and aspiration as well as career-related factors. There was some suggestion that junior staff believed that good relationships with colleagues was the most important job resource for promoting work engagement and commitment because of its ability to motivate and support them in their roles, while the seniors' staff (specifically the non-Saudi participants) prioritised adequate payment because it created a sense of security for them. Factors such as motivation and a sense of security, coupled with the feeling of being appreciated and valued at work, were found to recur over the course of the discussions. This is in keeping with wider literature on the subject of employee engagement, commitment, and retention. Adequate payment can give someone a sense of security in being able to look after their families and is also a reflection of how appreciated an employee might feel and this was reflected in the comparison with nurses' salaries. However, reward or compensation is not limited to pay but also includes factors related to the work environment such as career development and having feelings of worth and respect (Alshareef et al., 2019; Karunarathne & Gamage, 2020). Intrinsic compensation refers to feelings of value, security, enjoyment, and the sense of achievement that employees experience as a result of their work (Kuvaas, Buch & Dysvik, 2020), and it was clear from the discussion that these were also important to the participants.

Participants talked about the importance of having a work environment that fosters good relationships with colleagues and getting recognition from both colleagues and managers. Motivation and achievement were also highlighted as important, and this aligns with the results of the EI scoping review. That is, according to Goleman (1998), EI could be defined in terms of motivation because motivation refers to the emotional drive that helps individuals to achieve their goals, and feel satisfied and engaged in their work (Pooya et al., 2013). In addition, with regard to JS models (Herzberg and Achievement theories) identified in the JS scoping review, feeling a

sense of achievement and motivation are the main indicators and resources for stimulating job satisfaction and positive organisational outcomes, including ITR (Lane et al., 2010). These career-developing factors were referred to in subsequent questions by the participants and may, therefore, be regarded as an important aspect of an individual's choice to remain working within an organisation. This sense of feeling appreciated and valued should lead to a range of organisational benefits including greater creativity and work engagement, and increased commitment and satisfaction ((Syptak et al., 1999; Sarvadi, 2005).

The importance of a supportive environment was discussed by a number of participants, and this aligns with this notion of feeling safe and secure within the environment and receiving support from colleagues to reduce stress and to improve productivity. Therefore, an employer that 'fosters a supportive work environment,' while also appreciating their workforce, would be more likely to have employees who are engaged and interested (Anitha, 2014, p.311). This finding has implications in the context of the Kingdom of Saudi Arabia. That is, the disparities of being on yearly contracts and having limited opportunities for promotion for non-Saudis (compared to Saudi nationals), might heighten job insecurity and push non-Saudis to apply for jobs in other organisations with increased regularity. An alternative approach could be that organisations may offer different intrinsic and extrinsic motivation strategies to influence and retain employees who are non-natives. Empirical research indicates that different motivational strategies positively influence employee retention and reduction in turnover in public and private organisations (Samuel & Chipunza, 2009), and employee retention enhances organisational performance (Kurdi & Alshurideh, 2020).

Moving to the influence of personal resources, the high level of emotional intelligence and self-efficacy predicted greater work engagement and commitment, and around three quarters of the participants exhibited high emotional intelligence. Emotional intelligence was operationalised by four subscales of perception of motion, managing one's own emotions, managing other emotions, and utilising emotions (Schutte et al., 1998). Academic employees who have high emotional intelligence can control their negative emotions, communicate well with others, cope with changes, use humour to easily communicate and relieve stress, as well as manage difficulties, consequently enhancing their engagement in work (Shukla, 2013). When employees are emotionally stable and have high self-efficacy (a sense of ability to manage difficulties) they feel

a sense of emotional engagement and become involved in their organisations (Salovey & Mayer, 2007). The people in this sample reported good self-efficacy at mean of 32. These personal resources are of major importance for work engagement, which complies with the JD-R model. Hence, interventions aimed at increasing such personal resources in the workplace have proven to be effective (Möltner et al, 2017) and are thus recommended to improve work engagement (Mérida-López et al, 2020; Orgambídez et al., 2019).

The moderator effect of personal resources on the relationship between job demand and job stress outcomes was examined through assessing the significance of their interaction effects. The first personal resource was self-efficacy (GSE), and it was shown to have a moderator effect on the relation between total job demands and two burnout dimensions, namely MBI-EX and MBI-PE-Neg. The other personal resource, emotional intelligence, had a moderator effect only on the relation between total job demand and job satisfaction.

This might be explained by that a high level of self-efficacy would tend to lessen the burden of high job demands, and consequently buffers its effect on emotional exhaustion burnout, and thus leading to a better balance of the two sides of the JD-R model (Xanthopoulou et al., 2007). People with high self confidence that might create more ability to manage and cope with the stressors and prevent them from reach to the burnout. This might be due to that high self-efficacy at work is associated with more coping (Laschinger et al., 2015). The graphical analysis demonstrated that at a high-level self-efficacy (GSE), the relation between total job demand and burnout (MBI-PE-Neg.) is reversed, indicating that a high GSE has a buffering effect on the relation between total job demand and burnout dimension (MBI-PE-Neg.). This could be again attributed to that a nursing faculty with high self-efficacy is more capable of better personal accomplishment despite the high levels of job demands. The sample of study reported a good self-efficacy that might help to buffer the bad sequences of the job demand. Moreover, high self-efficacy may lead to lower burnout and higher work engagement through more perception of job demands as challenging rather than hindering factors (Ventura et al., 2015).

Emotional intelligence (SSEIT) was the second personal resource examined in this interaction. The results indicate that it had a moderator effect on the relationship between job demands and job satisfaction (JDI). It seems to reduce the negative effect of high job demand by

increasing job satisfaction. This might be attributed to that people having high levels of emotional intelligence are more able to cope the work demand and that increase their satisfaction. The findings are in support of Mérida-López et al. (2017)' study on Spanish teachers' emotional intelligence, where EI acted as a moderator to buffer and cope with the negative effect of job demands (role conflict) and increase the job satisfaction. The results can be clarified or justified by two important points. The first points that it might be sample of this study reflected that a 74.20 % of participants had high emotional intelligence and that help to buffer the job demands consequences by increasing satisfaction. The second point is that which emerged from systematic review and the two scoping reviews. EI is about how people understand and manage their emotions their emotion and manage the other emotions and all of these attributes appear to enable an individual to buffer the negative consequences of work demands. Essentially it means that emotionally intelligent people can cope better, manage stress, handle loads, adapt more and ultimately increase their job satisfaction. This result is supported by the findings of the two scoping reviews (Jacobs et al., 2008; Feather, 2009), and systematic review (Yamani, 2013).

The second interaction examined was the influence of total job resources (job autonomy, relationship with supervisor, relationship with colleagues, career development and support, and pay) as a potential moderator on the relation between total job demands and burnout. Among the three burnout dimensions, job resources had a significant interaction only with professional efficacy (MBI-PE). When job resources are high or average burnout is low in term professional efficacy. The PE in this study means the feelings of competence and successful achievement in one's work. However, at high levels of job demands (scores exceeding 60.00), the moderation effect is reversed, with higher burnout at the higher level of job resources. This implies that the job resources might help reduce this burnout dimension until a threshold of job demands. When this threshold is exceeded, the buffering effect of job resources is no more effective. This finding is difficult to explain and is contrary to other studies and suggests that the interaction is complex and requires further exploration. For example, Xiaoyi and Naruse (2019), in a study in Japan examining the moderating role of work relationships on the effect of time pressure on burnout among home-visiting nurses, demonstrated that good work relations buffered the negative impact of this job demand on nurses' burnout. Similarly, Xian et al. (2020) demonstrated a reducing effect of job resources on the relation between work demands and burnout. The authors concluded that a

higher level of job resources is associated with less negative effect of work demands on burnout (Falco et al., 2018).

Regarding the moderator effect of job resources on the relation between job demands and wellbeing (WEMWBS), the results identified a significant interaction confirming its role as a moderator of this relationship. The analysis showed that at higher and average levels of job resources, will buffer the negative effect of job demands on wellbeing. Moreover, this buffering effect lasted till the level of total job demands almost reached its maximal score of 100.00. Hence, job resources may be considered as an important moderator of the relationship between job demands and wellbeing at almost all levels of job demands. Supporting findings were reported in a German study that found that job resources improved workers' wellbeing and buffered the negative impact of stressful job demands (Müller et al, 2016). Similar finding emerged from the systematic review in chapter 3 that suggested that job resources e.g. pay, support, autonomy increase wellbeing and decrease job demands. This aligns well with the JD-R model. These moderation findings are interesting and suggest that reducing job demands alone may not be sufficient to reduce stress outcomes.

Research question four (RQ4) was: *Which stress outcomes (burnout, mental wellbeing, job satisfaction and work engagement/work commitment are associated or predict organisational outcomes of ITR in nursing faculties within this setting?*

This research question was addressed by cross sectional analysis in two ways; firstly, by using correlational analyses to determine the significant associations between the stress outcomes (burnout, mental wellbeing, and job satisfaction), work engagement/commitment variables and ITR; secondly, by using multiple regressions to identify which personal and professionals characteristic (age, gender, nationality, experience in academia and current institution), stress outcomes, work engagement/commitment predict the ITR. Increased burnout was associated with being less likely intention to remain, apart from professional efficacy and better mental well-being and job satisfaction with an increased likelihood of intending to remain.

The factors that predicted "Intention to Remain" (ITR) were high commitment and engagement, with the commitment being the more influential factor. This means that ITR is mainly dependent on the positive arm of the JD-R model (engagement and commitment) regardless the

negative arm elements or personal characteristics. The finding is in keeping with other studies who found that individuals who invest in their careers and the organisations within which they work do not have any plan to change or leave their professions (García-Sierra et al., 2016; Mukaihata et al., 2020).

It might be expected that the stress outcomes would have emerged as significant predictors of intention to remain, but this was not the case. For example, Moloney et al. (2018), suggest that an employee experiencing high burnout would have low work engagement, and thus is more likely to leave the organisation or even the profession (Moloney et al., 2018). However, none of the stress outcome or personal characteristics had any statistically significant influence on ITR in the multivariate analysis. This may be explained in a number of ways. The participants in this study had high EI, good mental wellbeing, and job satisfaction although around half had high levels of burnout. Perhaps the EI, mental wellbeing and job satisfaction reduced the negative effects of burnout. It may be that the stress outcomes such as burnout may have had a moderating effect on job resources and work engagement and commitment, but this was not tested in this study but should be explored further. It may be that there is something different about the Saudi academic culture within Colleges of Nursing and in particular the influence of culture including gender and nationality. In this study, only 28% of the variance was explained by work engagement and commitment. Decisions therefore about whether to remain in employment may be driven by variables not measured in this study, for example economic influences, job mobility, and ease of access in leaving an organisation or country (for example within the Kingdom of Saudi Arabia, non-Saudi employees have to relinquish passports to employers).

In keeping with the wider literature job satisfaction had a positive impact on ITR, albeit its beta coefficient did not reach the level of statistical significance ($p=0.084$). Other studies have demonstrated that a workplace managing workload and work demands, providing good organisational support with limited work conflict is associated with higher job satisfaction, with consequently lower turnover intention (Severinsson, 2012; Yanchus & Osatuke, 2015). The positive effect of job satisfaction on ITR is quite plausible since a satisfied employee is more likely to experience lower levels of burnout and is thus more likely to remain at work (Chen et al., 2019). However, the effect of job satisfaction on the intention to remain is still debatable and needs further studies (Al-Muallem & Al-Surimi, 2019). Nevertheless, interventions to improve employees' job

satisfaction have shown effectiveness in improving retention of employees in other populations ((Markos & Sridevi, 2010; McVicar, 2016). Therefore, the intervention to improve the ITR in Saudi higher education needs to be suggested by participants in the focus group and that will be addressed in the research question 6.

The fifth research question (RQ5) was: How do nursing faculties interpret the results of the cross-sectional survey within the context of HEs in Saudi Arabia?

This research question was addressed by the focus groups in a number of ways that have been highlighted throughout this chapter e.g., issues of gender and nationality. Responses suggest that participants understood the key concepts and issues, and many of these were discussed. Interpretation of the quantitative findings were enhanced by conducting the focus groups, in particular in relation to the issues associated with mental workload, mental health, gender and culture.

The sixth research question (RQ6) was: What recommendations can be made about improving ITR in HEs in a Saudi context?

This question was addressed in the focus group and elicited interesting discussion. In the focus group the participants explained that suggesting a number of recommendations to increase intention to remain. The participants across the focus groups offered suggestions that fell into three main areas: those that related to the individual, those that related to the work environment and those that needed to be addressed by the organisation.

Those that related to the individual were mainly around career development opportunities such as higher education and PhD study, those that were related to their roles and others that were around helping them to cope with existing pressures. Individuals wanted educational programmes to be more flexible and accessible, and more research training and opportunities (Shatterjalali et al., 2019). However, interestingly, development was not just about individuals pursuing their own ambitions, and some also identified support in maintaining and developing role related skills such as clinical practice. Participants also highlighted the need for additional training to help them cope with work-pressures, and emotional intelligence was mentioned specifically along with an environment where open discussion can take place. Suggestions that have emerged from a Middle

Eastern study included setting up development programmes to improve staff personal skills such as stress management, emotional intelligence, and resilience. Therefore, focusing on increasing personal resource development, rather than concentrating on job resources, might buffer the negative consequences of the demands and subsequently improve intention to remain (Shaterjalali et al., 2019).

The findings align with the Kingdom of Saudi Arabia's 2030 vision. In this vision, one of the projects focuses on the reforms in education which include enhancing teaching methods and strategies as well as improving higher educations (Allmnakrah & Evers, 2020). It may be that also helps to manage work challenges, as well as improving the work environment and therefore may increase desire to stay in academia (Jacobs & Washington, 2003). There was much discussion around having a welcoming and encouraging environment, having good communication, having clear role clarity and having clear standards and systems. An interesting finding was that participants want colleagues to have the appropriate qualifications, have a comprehensive orientation programme that includes helping non-Saudis adapt to the cultural differences (Al-Rubaish & Wosornu, 2009), and it sounded as if they also wanted a good quality assurance system. Improving the system accounted for a great deal of the discussion between participants. Saudi participants concentrated more on improving recruitment, ranking, health insurance and development programmes to increase their intention to remain. In contrast the non-Saudi concentrated in improving the contract system by extending this to be more than two years.

Other important issues were also highlighted and included the need to improve the system in line with the changes in Saudi culture e.g., to recognise gender issues specifically for females to be less stress and more satisfied to stay in work. This issue was discussed by detail (Al-Asfour et al., 2016). In addition, Saudi participants suggested that role clarity needed to be addressed as this hindered their intention to remain and they suggested developing clear job description for nursing faculty members. Linked to this, a Middle-Eastern study found also that staff preferred a manageable workload as well as improving the infrastructure and other facilities (von Alberti-Alhtaybat & Aazam, 2018).) The role of mentorship, a supportive work environment and leadership opportunities, as well as the feeling of being heard by senior officials - all have been attributed to contributing to the retention of faculties in higher education institutions (Piercy et al., 2005).

Recommendations related to the organisation were around rewards and career opportunities and were suggested by all participants. Participants felt strongly that they should be appropriately rewarded for their work in a number of ways that were not just about pay but included other benefits to enhance their intention to remain (Antonacopoulou, 2000). The need for payment improvement was discussed mostly by the junior staff members. This finding is supported by the cross-sectional results, as the less experienced participants reported less satisfaction with their pay. Finally, the participants suggested that organisation has a responsibility to help provide career development opportunities. Interestingly two male participants identified these.

Junior staff members were more likely to suggest developing postgraduate programmes and clinical skills improvements. Senior staff members were more likely to suggest improving personal skills through EI training and stress management. There were differences between the nationalities with Saudi participants wanted improvements in the work system such as recruitment, and in particular gender issues, but non-Saudis were more interested in contractual issues and extending contract length. Lastly related to rewards, benefits and salary this was extensively discussed. In general, most of the recommendations focussed on resources both job and personal, rather than demands.

8.5 How the Focus Group Findings Align with the JD-R Model

In summary, the JD-R model informed the focus group questions, so it is not surprising that there was good alignment of how the focus group used the variables of JD, PR and JR and model pathways to interpret the results. However, the focus group participants discussed a range of additional factors and emphasised the importance of resources both personal and job. These related to the individual, work environment and the organisation. Most of these additional factors could be applied to the JD-R concepts and further support the key quantitative finding that it is resources and not demands that influence intention to remain.

Personal resources or characteristics were important in the responses to most of the review questions. In the first focus group question posed the explanation of important of three JRs (pay, support, relationship with colleagues). All the responses to explain this result seem to reflect personal resources such as emotional intelligence but included two new additional resources

(appreciation and self-worth, sense of security, aspiration). Moving to second focus group question, responses of coping of stress was clearly highlighted the important role of new personal resources (personality, coping mechanism), and personal characteristics (age, experience). Also, the social and colleague and organisational support as (job resources) were discussed.

In the third focus group question which asked about the influence of mental load on stress outcomes, the responses were mostly about the personal resource (enjoyment, optimisms, sense of achievement), personal characteristics (experience), and JR (nature of the work, flexibility). Role clarity emerged as a solution to reduce the negative effects of the job demand role conflict. Challenges were seen as positive which fits with the JD-R developers (Bakker & Demerouti, 2017), notions that not all demands will have negative consequences.

The next question four sought to understand why women would be more dissatisfied with work and the experience of burnout as compared to their male counterparts. Responses here were once again about personal characteristics, personal resources (ambition, empowerment), demands (home demands) beside the job demand and environment (cultural factors. e.g. gender issue, prejudice). This reflected a gap in the model as culture and gender issues are not included. It might be suggested including and test these in further research.

The fifth question was to understand why Saudis reported poorer mental health regarding their work than non-Saudi faculty members. The responses highlighted again issue of culture (social stigma, social demands, family responsibilities or commitment) almost dominated this as well as JR (job security, rewards, opportunities). However, job resources emerged as important both for Saudis and non-Saudis but in different ways. Saudis have opportunities for career progression and job security, and non-Saudis have very limited opportunity, but their tangible rewards may be better than in their own country so that perhaps balances out.

The last focus group question (sixth) asked for recommendations or suggestions to improve the retention of faculty staff in higher education. Here, the key responses pertained to JR (Career development, pay, opportunities, benefits, system adjustment, work contract). PR (personal development e.g. EI), JD (role clarity), as well as work environment and cultural factors. Figure 8.1 presents variables that were identified in the focus groups and groups these according to the JD-R concepts with the addition of work environment specific factors.

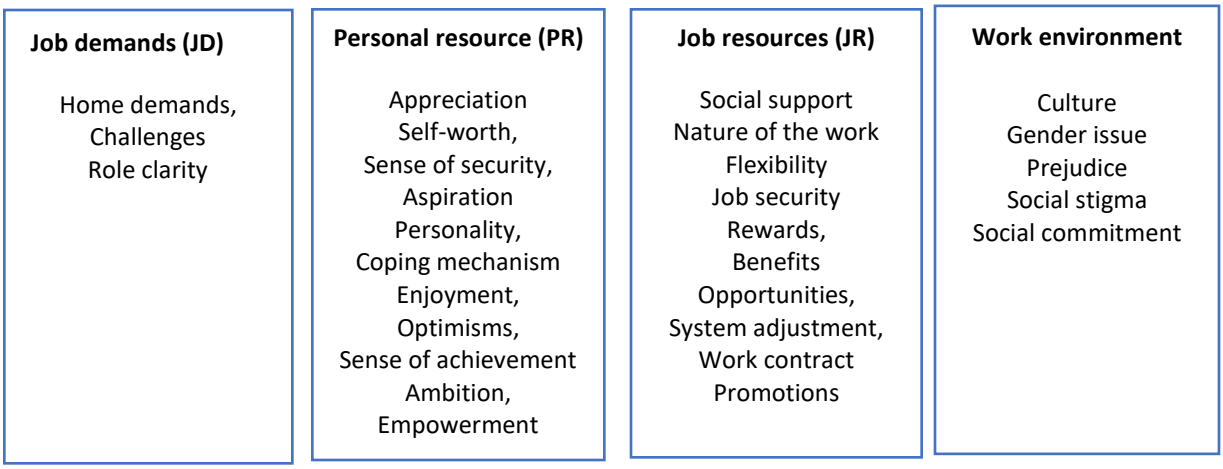


Figure 8.1: The New Explored Variables of JD-R Model from Focus Group to Explain the Cross-Sectional Study

8.6 Strengths and Limitations

There are several strengths and limitations from this study but here will be presented briefly as each chapter discussed these in detail. The first may be identified as the robust approach underpinned by various literature reviews of two scoping review and one systematic review. A second strength is that the study was underpinned by an established theoretical model that allowed testing of variable relationships. Thirdly, pilot work ensured the questionnaires were appropriate in a Saudi context, and recruitment strategies worked well as demonstrated by the good sample size and response rate for all phases. Participants represented an appropriate range of roles, experience, gender, nationality across 5 government colleges of nursing, suggesting these results may be generalisable. Fourthly, the explanatory, sequential mixed methods approach worked well in providing robust quantitative data which used standardised questionnaires, with focus groups providing additional explanation and added to the understanding of the issues. The qualitative methods complemented the quantitative results, and because these were conducted on-line, it was possible to include male participants.

However, there were certain limitations to the study as well. The use of a cross-sectional survey means that causality cannot be determined, and a longitudinal study would now be appropriate. Secondly the current pandemic necessitated having to change from face-to-face to on-

line focus groups. This brought different challenges, with some of the participants not using video, thereby reducing the extent to which their expressions and interaction could be assessed. In addition to this, government colleges of nursing were approached and studied which means that there could be differences between these and the private colleges.

8.7 Conclusion

The explanatory sequential mixed methods design following Creswell's (2011) approach worked well and addressed the research questions with integration carried out at all levels. The research design incorporated four phases study, the findings of which informed the next phase and ultimately sought to explore and answer the questions pertaining to the individual and work environment factors that influence nursing faculties' well-being, engagement and intention to remain. The methods of study including the recruitment and using the champions worked well, questionnaires were well accepted and response and completion rates good. Recruitment to the focus groups was also good. The main study findings are that the participants were highly emotionally intelligent with good mental health, high engagement but around half had high burnout levels. In univariate analyses, there were significant between group differences in gender, nationality and experience in academia with men demonstrating less burnout and higher job satisfaction; Saudi nationals having higher burnout, poorer mental wellbeing, poorer job satisfaction, less engagement but more commitment; older participants and those with more experience in academia having less burnout, better mental well-being and were more engaged. Multi-variate analyses identified gender, job demands (role conflict, mental workload emotional load, and pace and amount of work) as predictors of burnout, and job (pay, career development, relationships with colleagues) and personal (emotional intelligence, self-efficacy, resources as predictors of work engagement and commitment. Job and personal resources moderated the relationship between job demands and stress outcomes in some cases. The only predictors of intention to remain are commitment and engagement. Focus group data supported and explained these quantitative findings and identified a range of other factors such as culture and gender. Thus, personal and job resources and the motivational arm of the JD-R model are the strongest influence in this study.

8.8 Recommendations

The recommendations that follow from this study may be divided into recommendations for further research and those that may be incorporated at the individual and organisational level. In addition to this, both the survey and the focus groups discussed the role that gender, and nationality can play in influencing an individual's reaction to the workload and work environment and subsequently their ITR. The cultural context was repeatedly highlighted over the course of the focus groups- discussing how culture plays a role in the expectations placed on women, as well as the stigma attached to seeking help for mental health issues. There is a need also for preparation programme for non-Saudis that includes orientation about the context culture. These are crucial and require a wider discussion that cannot be restricted simply to the organisation and is also beyond the scope of this research. The focus groups concluded by highlighting the need for holistic changes within organisations as opposed to piecemeal changes in order to ensure that changes made would be long lasting and foster an environment that facilitates an employee's ITR.

8.8.1 At an Individual Level

Personal and career development:

- There is a need for EI training to cultivate a sense of emotional resilience among professionals and employees. This would not only benefit them but also the organisation as a whole.
- Developing training programmes to help staff cope and manage stressors.
- Since supervision and career development were also raised as important factors, suggestions may also be made to incorporate training and mentoring of less experienced and younger staff by senior staff. This could also facilitate the creation of a more supportive work environment - another aspect raised in the focus groups.
- Increase opportunities for career development such as easier access to higher education programmes.
- Access education about the importance of seeking mental health support to reduce stigma.

8.8.2 At an Organisational Level

- Improve role clarity by offering clear role description for staff and reduce workload or ensure a manageable workload.

- Flexible working hours for women to take into account their work-life balance and household duties to increase their satisfaction.
- Career opportunities, career development, for all but especially for women.
- Improve the work environment (relationship with colleagues) to create a healthy, supportive environment.
- Improvement the contract system for non-Saudis particularly in relation to the length of contract.
- Consider promotions for non-Saudis as well as Saudis accepting this might be challenging because the Saudi vision 2023 aims to increase the number of Saudi citizens in educational institutions under the programme of Saudisation.
- Improvement the pay scales with consideration of the rewards and benefits, accommodation, and insurance.
- Improve the research environment by offer more supportive opportunities.
- Update the support systems at work including recruitment and quality assurance.
- Provide an orientation programme that included cultural issues for non-Saudis to help them adjust to the Saudi culture.

8.8.3 At a Research Level

This PhD study has raised a number of questions to be addressed and areas for further exploration**.**

- As has been discussed over the course of this research, there is a need for context specific research into the concepts of EI and JS, and their relationship.
- There is a need to better understand the concept of JS and how it relates to job and personal resources within the context of the JD-R model.
- Additionally, there is a need for further research to understand role that culture and gender play when studying stress. The link between culture and gender and how it influenced was raised multiple times over the course of the focus groups. However, the existing literature is predominated based on research conducted in Western countries, and therefore there is a significant gap in both the Middle East and Saudi Arabia.
- Lastly, there is a need also for longitudinal study to determine how work-related stress changes overtime, establish predictors, moderators and mediators.

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Appendices

Appendix 1 - Summary of Included Studies of EI Scoping Review 1

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
1	O'Connell (2015)	Review	UK	1 country	An account regarding the legal principles governing the consequences of changes of sovereignty, focusing particularly on British practice during the preceding 150 years.	The legal principles governing British practice are compared with those of other states in order to record the main points of doctrinal agreement or divergence. Special importance is given to practice following the Second World War, in particular the partition of British India in 1947.
2	Landy (2014)	Review	Global	NA	A comprehensive historical treatment of the construct and measurement of social intelligence.	This traces the development of the construct of social intelligence from its introduction into the scientific literature until it was replaced with the more modern term of emotional intelligence.
3	Wang & Kong (2014)	Quantitative	China	321 participants	To test the mediating role of emotional intelligence in the impact of mindfulness on life satisfaction and mental distress in a sample of Chinese adults and the widespread or limited mediators between the different groups in demographic factors, e.g., gender, students and non-students.	EI partially mediated the impact of mindfulness on life satisfaction and mental distress. Moreover, multi-group analyses indicated that no significant path in the final model differed across sex by gender, but non-students with high levels of mindfulness are more likely to perceive greater life satisfaction than students.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
4	O'Boyle, et al (2011)	Meta analysis	Malaysia	118 respondents.	To investigate the relationship between emotional intelligence and job performance of call centre agents.	The correlational analysis was carried out and the result indicated there was a relationship between EI and job performance.
5	Brannick, et al. (2009)	Quantitative	USA	247 medical students	To compare trait and ability measures of emotional intelligence in medical students.	Different tests that are supposed to measure EI do not measure the same thing. The ability measure was not correlated with personality, but the trait measure was correlated with personality.
6	Feather (2009)	Review	Global	NA	To discuss the importance of studying emotional intelligence (EI) of nursing leaders and the job satisfaction of nursing staff.	There is a need for further research in the area of EI of nurse managers in their role as leaders and the impact they have on the job satisfaction level of their nursing staff. The increasing nursing shortage and turnover rates signify the importance of research in the EI level of nursing leaders. Future research may include implementing educational programmes in the area of EI for nursing leaders resulting in a more positive work environment. Determining if EI influences nursing job satisfaction will provide a foundation for ongoing programme implementation to support and develop our nursing leaders.
7	Austin, Saklofske & Egan (2005)	Quantitative	Canada & Scotland	500 Canadians and 204 Scots	To assess emotional intelligence (EI), personality, alexithymia, life satisfaction, social support and health related measures	1. EI was found to be negatively associated with alexithymia and alcohol consumption and positively associated with life satisfaction and social network size and quality.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						2. EI is more strongly associated than personality with social network size, but social network quality, life satisfaction, alcohol consumption, number of doctor consultations and health status are more strongly related to personality.
8	Barsade & Gibson (1998)	Review	Global	Not applicable (NA)	To study whether groups can have emotions.	The notion of 'groupness' or the feeling that one is part of something larger than oneself is an emotional one. Group emotions can serve as powerful filters through which people perceive and enact their work, view and interact with their colleagues and their place within an organisation.
9	Boyatzis, Goleman & Rhee (2000)	Mixed methods	Global	NA	To describe a model of emotional intelligence based on the competencies that enable a person to demonstrate intelligent use of their emotions in managing themselves and working with others to be effective at work.	Complexity theory suggests that fractals do exist. The study predicts they exist within the structure of human personality and that competency clusters are a necessary level of variable needed to find and see the fractals. At the same time, prior research suggests that arousal or activation of any of the motive, trait, philosophical, and/or behavioural level through competencies affects and arouses the hormonal, motive, trait, and other levels within the personality.
10	Brackett & Salovey (2006)	Review	Global	NA	To examine the measurement instrument developed from the ability model of EI, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)	The authors reviewed the associations between MSCEIT scores and important outcomes such as academic performance, cognitive processes, psychological well-being, depression, anxiety,

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						prosocial and maladaptive behaviour, and leadership and organisational behaviour. Findings regarding the low correlations between MSCEIT scores and self-report measures of EI also are presented.
11	Brody (2004)	Review	Global	NA	To analyse what is cognitive intelligence and is emotional intelligence as well as the ways to assess them.	1. The items used to assess EI are fundamentally different from items used to assess cognitive intelligence. 2. The measures of cognitive intelligence may be construed as measures of a latent trait. 3. There is no convincing evidence that the MSCEIT provides incremental predictive validity over and above standard measures of intelligence and personality for important socially relevant outcomes.
12	Dries & Pepermans (2007)	Quantitative	USA	51 high potentials and 51 “regular” managers	To demonstrate the utility of using some indication of emotional intelligence (EI) to identify high potential in managers.	1. EQ-i subscales: assertiveness, independence, optimism, flexibility and social responsibility appear to be “covert” high-potential identification criteria, separating between high potentials and regular managers. Furthermore, high potentials display higher levels of job performance and, supposedly, less boundaryless career attitudes.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						2. Using emotional intelligence – or at least some of its subscales – in identifying high potential may well contribute to the validity of such processes.
13	Emmerling & Goleman (2003)	Review	Global	NA	To catalyse a dialogue among those with an interest in emotional intelligence.	Provides an overview of emotional intelligence, its theories as well as its relationship with ethics.
14	Feyerherm & Rice (2002)	Quantitative	USA	26 customer service teams and their leaders	To investigate the relationship among a team's emotional intelligence, the team leader's emotional intelligence, and team performance.	1. Team leader EI has a neutral to negative relationship with team performance from the team members' perspectives. 2. A negative relationship exists between team leader EI and team performance as rated by individuals. The only positive correlation was between team leaders understanding emotion scores and customer service, as rated by managers. This result is consistent with the findings stated previously that team EI positively correlates with customer service.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
15	Freudenthaler, Neubauer (2007)	Quantitative	Austrila	176	To examine the effects of two instruction forms - maximum performance instruction vs typical performance instruction on the EMA-scores in a between-subject design.	Maximum emotional management abilities (EMA) were significantly correlated with cognitive intelligence components but not with personality traits. In contrast, the typical EMA were moderately associated with personality traits but not related to cognitive abilities, providing further evidence of the importance to distinguish between typical and maximum performance.
16	George (2000)	Review	Global	NA	How does emotional intelligence contribute to effective leadership?	Emotional intelligence has the potential to contribute to effective leadership in multiple ways. This is because leadership is an emotion-laden process, both from a leader and a follower perspective.
17	Iordanoglou (2007)	Quantitative	Greece	332 primary education teachers	To examine the relationships among emotional intelligence, leadership effectiveness, commitment, and satisfaction in education.	1. A strong positive effect was apparent on teachers' commitment and effectiveness, as measured by teachers' perception. 2. Leadership roles such as performance evaluation, motivation support, and development improvement had a strong influence on effectiveness.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
18	Jacobs, et al. (2008)	Quantitative	USA	Patients with GSP (n = 28) and healthy comparison individuals (n = 21)	Is there an association between emotional intelligence and the severity of anxiety in people with generalised social phobia?	Patients with Generalised Social Phobia (GSP) performed within the normal range on the measure; however, the severity of social anxiety significantly correlated with emotional intelligence (EI). Specifically, there was a negative correlation between social anxiety severity and Experiential (basic-level emotional processing) EI. In contrast, there was no significant correlation between social anxiety severity and Strategic (higher-level conscious emotional processing) EI.
19	Jain & Sinha (2005)	Quantitative	India	250 middle-level executives from 2-wheeler manufacturing organisations.	To examine the predictive ability of emotional intelligence (EI), trust, and organisational support in general health.	1. The dimension of EI termed positive attitude about life predicted both factors of general health positively: (a) sense of accomplishment and contribution and (b) botheration-free existence. 2. Organisational support predicted a sense of accomplishment and contribution, whereas vertical trust predicted botheration-free existence, accompanied by the assertiveness and positive self-concept dimension of EI.
20	Julian (2005)	Quantitative	USA	Two cohorts from 14	A comprehensive summary of the relationships between Medical College Admission Test (MCAT) scores and (1) medical school grades, (2) United States	1. Grades were best predicted by a combination of MCAT scores and undergraduate grade point

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
				medical schools	Medical Licensing Examination (USMLE) Step scores, and (3) academic distinction or difficulty.	averages (uGPAs), with MCAT scores providing a substantial increment over uGPAs. 2. MCAT scores were better predictors of USMLE Step scores than were uGPAs, and the combination did little better than MCAT scores alone. The probability of experiencing academic difficulty or distinction tended to vary with MCAT scores.
21	Kafetsios & Loumakou (2007)	Quantitative	Greece	475 educators	To examine the associations of trait Emotional Intelligence (EI) and emotional regulation with affect and satisfaction at work.	Among the EI branches only general mood had consistent predictive value for affect at work. Emotion regulation had unique predictive power for affect and job satisfaction for the younger age group. There was minimal evidence for emotion regulation being a mediator between EI and affect at work in either age group.
22	Kohan (2002)	Quantitative	Canada	533 Participants .	To contribute information to the area by examining the discriminant and concurrent validity of two relatively new self-report measures of El.	1. EI played a minimal moderating role in the experience of burnout. Collectively, the data provide controvertible evidence for the existence of unique EIS factors, but highlight the merit of further inquiry using these two measures of El. 2. Other findings lent support to the importance of (1) work demands to burnout over and above personality, (2) the mediating effects of cynicism in the experience of burnout, and (3) considering

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						workers' perceptions of the organisation as resources against burnout
23	Lusch & Serpkenci (1990)	Quantitative	USA	182 stores and their managers	To investigate the relationships between four personal difference variables and job outcomes of retail store managers.	It was found that achievement orientation and inner- and other-direction of retail store managers have important direct as well as moderating influences on key job processes and outcomes. Empirical results demonstrate the critical influence of managerial effectiveness on retail store performance.
24	Mayer, Salovey & Caruso (2008)	Review	Global		What is emotional intelligence?	There is widespread misuse of the term EI to apply to concepts that simply are not concerned with emotion or intelligence or their intersection. The misuses of the term are invalid in that they attempt to overthrow or subvert the standard scientific language in psychology, with no apparent rationale for doing so.
25	Modassir & Singh (2008)	Quantitative	India	114 respondents	To examine the relationship of emotional intelligence (EI) with transformational leadership (TL) and organisational citizenship behaviour (OCB) of the followers.	EI of leaders enhances the OCB of followers. However, EI of the leader may not be the only factor determining the perception of TL.
26	Mayer, Salovey &	Review	Global	NA	To review several competing concepts of emotional intelligence.	What emotional intelligence may predict and discuss the opportunities, real and imagined, that exist more generally in the fields of intelligence

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
	Caruso (2000)					and personality for studying an individual's success are all discussed.
27	Newsome, Day & Catano (2000)	Review	Global	NA	What is the predictive validity of emotional intelligence?	The Bar-On test has no predictive validity when it comes to getting good grades in school. In the words of the authors there is "no support" for the claims made in the Bar-On manual which is published by the marketers of the Bar-On test.
28	O'Connor & Little (2003)	Quantitative	USA	90 psychology university students	To examine the relationship between emotional intelligence (EI) and academic achievement in college students, using both self-report and ability-based measures of EI.	EI is not a strong predictor of academic achievement regardless of the type of instrument used to measure it. However, a construct validity examination revealed that the MSCEIT correlated highly with indices of cognitive ability but minimally with personality dimensions. In contrast, the EQ-i failed to correlate with indices of cognitive ability but correlated substantially with numerous personality dimensions.
29	Parker, et al (2004)	Quantitative	USA	667 students	To examine the relationship between emotional intelligence and academic achievement in high school	When Emotional Quotient Inventory (EQ-i: YV) variables were compared in groups who had achieved very different levels of academic success (highly successful students, moderately successful, and less successful based on grade-point-average for the year), academic success was strongly associated with several dimensions of emotional intelligence.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
30	Petrides (2009)	Review	Global	NA	An introduction to the theory and psychometric properties of the Trait Emotional Intelligence Questionnaire (TEIQue)	The inventory shows adequate reliability and temporal stability at the global, factor (4), and facet (15) levels. It has a clear and replicable factor structure comprising four distinct, but interrelated, dimensions: Emotionality, Self-control, Sociability, and Well-being. Self-other TEIQue correlations are substantial and similar to those observed for the Big Five.
31	Petrides, Frederickson & Furnham (2009)	Quantitative	UK	650 students	To examine the role of trait emotional intelligence (‘trait EI') in academic performance and in deviant behaviour at school.	1. Trait EI moderated the relationship between cognitive ability and academic performance. In addition, pupils with high trait EI scores were less likely to have had unauthorised absences and less likely to have been excluded from school. 2. Most trait EI effects persisted even after controlling for personality variance. It is concluded that the constellation of emotion-related self-perceived abilities and dispositions that the construct of trait EI encompasses is implicated in academic performance and deviant behaviour, with effects that are particularly relevant to vulnerable or disadvantaged adolescents.
32	Reis, et al. (2007)	Review	Global	2 studies	Whether a performance measure of EI is related to reasoning about social	EI is mediated in part by mechanisms supporting social reasoning and validates a new approach to

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
					situations (specifically social exchange reasoning)	investigating EI in terms of more basic information processing mechanisms.
33	Roberts & Mroczek (2008)	Review	Global	NA	Do personality traits change with age even into adulthood?	Personality traits are developmental constructs, even in adulthood.
34	Roberts, Zeidner & Matthews (2001)	Quantitative	USA	704 participants	To test if emotional intelligence tests meet the traditional standards for intelligence	Although the Multifactor Emotional Intelligence Scale (MEIS) showed convergent validity (correlating moderately with the Armed Services Vocational Aptitude Battery or ASVAB) and divergent validity (correlating minimally with the Trait Self-Description Inventory or TSDI), different scoring protocols (i.e., expert and consensus) yielded contradictory findings. Analyses of factor structure and subscale reliability identified further measurement problems. Overall, it is questionable whether the MEIS operationalises EI as a reliable and valid construct.
35	Ryue & Lee (2012)	Review	Korea	NA	To examine the cognitive, emotional and social characteristics of Korean medical students.	In the cognitive and learning aspects, preliminary doctors were under the influence of prior knowledge; cumulative learning; self-efficacy; and visual, logical, non-self-led learning types and had external learning motivation. In the adaptive emotional aspects, they appeared to be the ISTJ (introversion, sensing, thinking,

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						judging) personality type with regard to the Myers-Briggs indicators and perfectionists, suffering from severe academic stress. Their motivation on matriculation was associated with their interests and aptitudes, and through community service, they adapted to the learning and living environment of medicine. In the social and moral aspects, they did not have high moral judgment, felt devalued about their job than before, and tended to have an open and flexible doctor-patient relationship.
36	Schutte, et al. (2007)	Meta-analysis	USA	7898 participants	Is there a relationship between emotional intelligence and health?	Higher emotional intelligence was associated with better health.
37	Freshman & Rubino (2002)	Review	NA	NA	Is the concept of emotional intelligence (EI) a critical set of management skills in its current application for health care administration?	The contributions of EI to effective management are supported by empirical research in the field. The importance of developing EI skills in health care organisations is clarified with examples familiar to health care administrators.
38	Dawda & Hart (2000)	Quantitative	USA	243 university students	To examine the reliability and validity of a new measure of emotional (i.e. non-cognitive) intelligence, the Bar-On Emotional Quotient Inventory (EQ-i).	1. The EQ-i domain and component scales had good item homogeneity and internal consistency. Scores were not unduly affected by response styles or biases. The EQ-i scales had a meaningful pattern of convergent validities with respect to measures of normal personality,

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						depression, somatic symptomatology, intensity of affective experience and alexithymia. 2. The reliability and validity results for men and women were very similar. Overall, the results suggested that the EQ-i is a promising measure of emotional intelligence.
39	Bar-On (2006)	Quantitative	Global	NA	To present, describe, and examine the Bar-On Model of Emotional-Social Intelligence (ESI)	1.Emotional-social intelligence (ESI), as conceptualised by the Bar-On model, is a multi-factorial array of interrelated emotional and social competencies, skills and facilitators that influence one's ability to recognise, understand and manage emotions, to relate with others, to adapt to change and solve problems of a personal and interpersonal nature, and to cope with daily demands efficiently, challenges and pressures. 2. It has also been shown that the development of this model has been rigorous, and that the outcome of this process has produced a valid concept and measure of ESI.
40	Sevdalis, Petrides & Harvey (2007)	Review	Global	NA	To report research that examines the relationship between trait emotional intelligence (trait EI or trait emotional self-efficacy) and decision-related affect.	1. In Study 1, there was a positive relationship between trait EI and the deterioration of mood after the recall of a poor real-life decision. 2. In Study 2, there was a negative relationship between trait EI and negative emotions

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
						experienced a few days after a failed negotiation. In addition, trait EI was positively associated with affective over prediction.
41	Shi & Wang (2007)	Quantitative	China	1458 university students	To revise Wong and Law's (2002) Emotional Intelligence Scale (WLEIS), and specifically examined the feasibility of its use with Chinese university students.	1. The scale had acceptable reliability, concurrent validity, convergent and discriminant validity. The psychometric features of the Chinese scale supported its feasibility as a research instrument to measure EI appropriately in Chinese university students. 2. The results also showed that Chinese male students had higher EI scores than female students, reflecting a deviation from previous research.
42	Cherniss (2000)	Review	Global	NA	To describe the history of the concept as an area of research and describe how it has come to be defined and measured.	In some ways, emotional intelligence is not new. A person's ability to perceive, identify, and manage emotion provides the basis for the kinds of social and emotional competencies that are important for success in almost any job. Furthermore, as the pace of change increases and the world of work makes ever greater demands on a person is cognitive, emotional, and physical resources, this particular set of abilities will become increasingly important.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
43	Shulman & Hemenover (2006)	Quantitative	USA	Two studies (Ns = 263, 116)	To examine the utility of dispositional models of emotional intelligence	Dispositional EI is not synonymous with personality and predicts meaningful life outcomes above and beyond the Big-Five personality traits.
44	Slaski & Cartwright (2003)	Quantitative	UK	60 managers	To examine the role of emotional intelligence (EI) as a moderator in the stress process.	It was found that training resulted in increased EI and improved health and well-being.
45	Stein, et al (2009)	Quantitative	Canada	186 executives	1. To examine the emotional intelligence (EI) scores of two high profile executive groups in comparison with the general population. 2. To investigate the executive group's EI scores in relation to various organisational outcomes such as net profit, growth management, and employee management and retention.	The results showed that top executives differed significantly from the normative population on the Emotional Quotient Inventory (EQ-i) in eight of the 15 EQ-i subscales. Executives who possessed higher levels of empathy, self-regard, reality testing, and problem-solving were more likely to yield high profit-earning companies, while Total EQ-i was related to the degree to which a challenge was perceived as being easy with respect to managing growth, managing others, and training and retaining employees.
46	Sternberg (1996)	Review	Global	Ten myths	Ten myths and counter myths about intelligence are considered	Intelligence is only one attribute of human beings and one attribute leading to certain kinds of success, but tests of intelligence can at best provide measures of certain cognitive skill. A holistic approach towards understanding intelligence is recommended.

Serial No	Reference	Type of Study	Context	Sample size	Objective	Main findings
47	Vitello-Cicciu (2002)	Review	Global	2 models	To explore the connection between EI and workplace success.	The author contrasts 2 current models of emotional intelligence, the measurements being used, and the ability of emotional intelligence to predict success. Implications for the workplace are discussed.
48	Wechsler (1993)	Quantitative	Global	873 participants	The role of non-intellective attributes in determining intelligence.	Non-intellective attributes are vital in determining the intelligence of individuals.
49	Yang & Chang (2008)	Quantitative	Taiwan	500 nursing staff; 295 valid questionnaires	To examine the relationship between emotional labour, job satisfaction, and organisational commitment from the perspective of nursing staff.	1. Emotional display rule (EDR) was significantly and negatively related to job satisfaction. Surface acting (SA) was not significantly related to job satisfaction but demonstrated a significantly negative relationship with organisational commitment. 2. Deep acting (DA) significantly and positively correlated with job satisfaction but demonstrated no significance with organisational commitment. 3. The variety of emotions required (VER) was not significantly related to job satisfaction; frequency and duration of interaction (FDI) and negatively related to job satisfaction; and job satisfaction significantly and positively correlated with organisational commitment.

Appendix 2 - Summary of Included Studies of JS Scoping Review 2

Serial No	Reference	Type of Study (Review, quantitative, qualitative, mixed methods)	Context (country specific or global)	Sample size	Objective	Main findings
1	Abbas, et al (2015)	Quantitative	Pakistan	182 employees	Study the main effects of Islamic Work Ethic (IWE) and perceived organisational justice on turnover intentions, job satisfaction, and job involvement. Investigate the moderating influence of IWE in justice–outcomes relationship.	1. IWE was found to be positively related to satisfaction and involvement and negatively related to turnover intentions. Distributive fairness was negatively related to turnover intentions, whereas procedural justice was positively related to satisfaction. 2. Procedural justice was positively related to involvement and satisfaction for individuals high on IWE however it was negatively related to both outcomes for individuals low on IWE. 3. For low IWE, procedural justice was positively related to turnover intentions, however it was negatively related to turnover intentions for high IWE. In contrast, distributive justice was negatively related to turnover intentions for low IWE and it was positively related to turnover intentions for high IWE.
2	Ahmad & Oranya (2010)	Quantitative	UK and Malaysia	556 registered nurses	To examine the relationships between nurses' empowerment, job satisfaction and organizational	Although the Malaysian nurses felt more empowered and committed to their organization, the English nurses were more satisfied with their job. The differences between these two groups of nurses show

					commitment in culturally and developmentally different societies.	that empowerment does not generate the same results in all countries, and reflects empirical evidence from most cross cultural studies on empowerment.
3	Ashforth & Saks (2000)	Quantitative	UK	297 business school graduates after four months and 231 after ten months	To study personal control over one's work environment and responses to perceived personal control.	1. The first response is a proactive orientation where control begets control: self-efficacy was positively associated with control, both variables were positively associated with problem-focused reactance, control and reactance were both negatively related to helplessness, and helplessness was negatively related to work adjustment. 2. The second response to personal control implies a reactive orientation where unmet expectations prompt a sense of futility and withdrawal: control was negatively associated with unmet expectations, and unmet expectations were positively associated with helplessness and negatively associated with work adjustment.
4	Aziri (2011)	Review	Global	NA	What factors influence job satisfaction? How are motivation and job satisfaction linked?	The level of motivation has an impact on productivity, and also on the performance of business organizations. Financial compensation has a great impact on the overall job satisfaction of employees.
5	Brokalaki, et al (2001)	Quantitative	Greece	682 members of nursing personnel	To describe work-related factors that contribute to increased levels of stress experienced by nursing personnel, and to compare their impact on nurses and assistant nurses who work in Dialysis Units (DU) to	Working in DU and PDU provokes increased stress in nursing personnel, even though the implicated stress factors differ between these units.

					those who work in Peritoneal Dialysis Units (PDU).	
6	Chan (2006)	Quantitative	USA	139 employees	What are the linkages between proactive personalities and work outcomes? What is the role of situational judgement effectiveness?	1. Proactive personality predicts work perceptions (procedural justice perception, perceived supervisor support, and social integration) and work outcomes (job satisfaction, affective organizational commitment, and job performance) positively among individuals with high situational judgment effectiveness (SJE) but negatively among those with low SJE. 2. The findings on the biordinal SJE = PAP interaction effects show that high levels of PAP may be either adaptive or maladaptive, depending on the individual's level of SJE, and these findings caution against direct interpretations of bivariate associations between PAP and work-relevant criteria.
7	Chen, et al (2012)	Quantitative	China	206 frontline hotel employees (Study 1) and 111 employee–supervisor dyads (Study 2)	How is emotional labour of hotel employees associated with affective and behavioural outcomes?	1. Surface acting is negatively related to job satisfaction but positively related to burnout. Meanwhile, deep acting is positively related to job satisfaction but negatively related to burnout. Additionally, job satisfaction and burnout were found to mediate the relationship between emotional labour and work performance. 2. Supervisory support moderated the relationships between emotional labour and job satisfaction and burnout.

8	Coomber & Barriball (2007)	Review	UK	NA	To explore the impact of job satisfaction components on intent to leave and turnover for hospital-based nurses in order to identify the most influential factors.	Stress and leadership issues continue to exert influence on dissatisfaction and turnover for nurses. Level of education achieved, and pay were found to be associated with job satisfaction, although the results for these factors were not consistent.
9	Diener, et al (1985)	Quantitative	USA	Groups of 176 and 163 undergraduates and 53 elderly	Development and validation of a scale designed to measure global life satisfaction, the Satisfaction with Life Scale (SWLS).	Scores on the SWLS correlated moderately to highly with other measures of subjective well-being (e.g., Rosenberg Self-Esteem Scale, Marlowe-Crowne Social Desirability Scale) and correlated predictably with specific personality characteristics.
10	Doumit, Yaktin & Azoury (2003)	Quantitative	Lebanon	421 registered nurses	The level of satisfaction of Lebanese nurses in their job and the influence of their personal characteristics.	1. The findings suggest that personal characteristics have important influences on nurses' job perceptions. University graduate nurses reported more dissatisfaction with the quality of supervision and with respect and treatment they receive from their superiors. Nurses younger than 30 years and the technically trained were more dissatisfied with the available opportunities to attend continuing education courses. 2. Results of staff nurses and unmarried nurses showed trends of more dissatisfaction than the married and nurses of higher positions.
11	Garbee & Killacky (2008)	Quantitative	USA	316 respondents	To discover a parsimonious set of predictor variables from the variables of job satisfaction, mentoring, organizational commitment, and leadership	Intent to stay in nursing education was found to be influenced by organizational commitment and mentored faculty.

					behaviors for intent to stay in nursing education.	
12	Gawel (1997)	Review	Global	2 theories and 1 study	This study first provides brief outlines of the Herzberg and Maslow theories. It then summarizes a study by members of the Tennessee Career Ladder Program (TCLP).	The teachers in the program do not match the behaviour of people employed in business. Specifically, the findings disagree with Herzberg in relation to the importance of money as a motivator and with Maslow in regard to the position of esteem in a person's hierarchy of needs.
13	George & Badenhorst (2008)	Quantitative	Namibia	337 secondary school teachers	An exploratory study on the role of extrinsic and intrinsic factors in determining job satisfaction amongst urban secondary-school teachers in Namibia	Results showed significant levels of dissatisfaction pertaining to intrinsic factors of work and, more especially, those factors relating to school area and rank. A significant correlation between levels of burnout and job satisfaction was found, particularly in respect of emotional exhaustion and depersonalization, which were shown to correlate with low levels of job satisfaction.
14	Hayes & Bonner (2010)	Review	Global	9 papers	What are the factors affecting job satisfaction, stress and burnout with haemodialysis nursing?	Factors affecting job satisfaction were aspects of nursing care, organisational factors and length of time that a nurse has been working in nephrology nursing. Factors affecting job stress and burnout were due to interpersonal relationships with physicians, patient care activities, violence and abuse from patients, organisational factors and a lack of access to ongoing education.
15	Hochwarter, et al (1999)	Quantitative	USA	270 managerial personnel of	To investigate whether value attainment and affective disposition would demonstrate complex	Three-way interactions demonstrated that the strongest positive relationship between job satisfaction and performance occurred when high

				national hotel chains	interactions with performance and satisfaction.	value attainment was coupled with either high positive or low negative affective disposition.
16	Ironson, et al (1989)	Quantitative	Global	Three large heterogeneous samples (N = 1,149, 3,566, and 4,490).	Global scales are contrasted with composite and with facet scales in psychological measurement.	Global scales are not equivalent to summated facet scales. Both facet and global scales were useful in another organization. Some principles are suggested for choosing specific (facet), composite, or global measures for practical and theoretical problems. The correlations between global and facet scales suggest that work may be the most important facet in relation to general job satisfaction.
17	Jiang, et al (2012)	Meta Analysis	Global	65 independent samples (N = 42,907)	An overall model of the relationships between job embeddedness and turnover outcomes.	On-the-job and off-the-job embeddedness negatively related to turnover intentions and actual turnover, after controlling for job satisfaction, affective commitment, and job alternatives.
18	Judge & Bono (2001)	Meta Analysis	Global	NA	To study the relationship of 4 traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism)—with job satisfaction and job performance.	Results of the study indicate that self- esteem, locus of control, neuroticism, and generalized self-efficacy are significant predictors of both job satisfaction and job performance.
19	Judge, Heller & Mount (2002)	Meta Analysis	Global	NA	How the five-factor model of personality relates to job satisfaction.	The five-factor model is a fruitful basis for examining the dispositional source of job satisfaction. In particular, the traits of neuroticism, extraversion, and conscientiousness displayed moderate correlations with job satisfaction. Agreeableness and openness to experience displayed relatively weak correlations with job satisfaction.

20	Kent & Chelladurai (2001)	Quantitative	USA	108 third tier employees	To test whether leadership influences from different sources and levels would be conducive for the effective functioning of an organisation	The three dimensions of transformational leadership behaviours (TL) were significantly correlated with leader-member exchange quality (LMX). Additionally, the dimensions of TL and LMX were differentially related to organizational commitment and organizational citizenship behaviour.
21	Lane, et al (2010)	Qualitative	USA	Associates in Science Programme faculty from the 23 community colleges in Florida that offer a nursing programme.	To explore the constructs of job satisfaction and intent to stay.	1.The study found that the nurse faculty were most passionate about the salary and the work itself. The overwhelming majority response was that the faculty loved their jobs. This study found that overall job satisfaction can be used as a predictor for intent to stay. 2. Findings further revealed that nurse faculty in community colleges in Florida are generally satisfied with their jobs and have intent to stay.
22	Moynihan & Pandey (2007)	Quantitative	USA	570 managers from the 50 states and Washington, D.C.	To develop and test a model of work motivation.	It was found that managers have varying degrees of influence over the different aspects of work motivation, with greatest influence over job satisfaction and least influence over job involvement.
23	Perumal & Sehgal (2003)	Quantitative	USA	240 nurses and technicians from 307 randomly selected American facilities	Factors affecting the job satisfaction of the nurses and technicians providing hemodialysis care	Higher job satisfaction was associated with increased attention to patient psychosocial and educational needs.

24	Pietersen (2005)	Quantitative	South Africa	109 nursing staff	This study examined the job satisfaction of nursing staff at a government hospital.	Feelings that nursing is worthwhile and satisfying, and financial stability at the hospital could promote staff retention. Specific intrinsic - (promotion), and extrinsic factors (routinization, working conditions, pay, interaction with supervisors, and organizational support) could impact negatively on retention.
25	Ravari, et al (2012)	Mixed methods	Iran	533 nurses	The influence of self-expectation, social interaction, and organisational situation on job satisfaction among nurses is examined.	The results indicate that personal beliefs, rather than social interaction or organisational situation, constitute the core of job satisfaction.
26	Ross, et al (2009)	Quantitative	Canada	97 students at a university in Southwestern Ontario participated in the present study. The sample was comprised of 15 men and 82 women	To investigate how the Five-Factor Model of personality relates to Facebook use.	The results indicated that personality factors were not as influential as previous literature would suggest. The results also indicated that a motivation to communicate was influential in terms of Facebook use.
27	Schleicher, Watt & Greguras (2004)	Quantitative	USA	Sixty-five employees	To study whether organizational researchers tend to adopt an overly simplistic conceptualization and operationalization of job satisfaction (and job attitudes in general).	The qualities of attitudes discussed and investigated in the present research are well established in many areas of the psychological literature, but there has not been extensive use of this knowledge in organizational behaviour research.

28	Shahjahan (2004)	Qualitative	Global	NA	How would entering spirituality transform our ways of teaching and learning?	Teaching must be used to inspire, facilitate student spirituality, create an inclusive curriculum for the sacred and embody the spirit of equity.
29	Spector (1985)	Quantitative	USA	3,148 respondents who constituted 19 separate samples. Employees from human service, public, including community mental health centres, state psychiatric hospitals, state social service departments, and nursing homes.	The development of the Job Satisfaction Survey (JSS), a nine-subscale measure of employee job satisfaction applicable specifically to human service, public, and non-profit sector organizations, is described.	The strongest correlations were with perceptions of the job and supervisor, intention of quitting, and organizational commitment. More modest correlations were found with salary, age, level, absenteeism, and turnover.
30	Spector (1997)	Review	Global	NA	To provide an introduction to and an overview of the vast job satisfaction research literature.	Job satisfaction is associated with many important behaviours and outcomes for employees that have implications for organizational and personal well-being.
31	Statt (2004)	Review	Global	NA	To provide a fully comprehensive resource for those wanting to know	Job satisfaction is one of the outcomes that required to reach by offering the job resources to improve the work performance.

					about the world of business management.	
32	Staw & Ross (1985)	Quantitative	USA	5,000 45–59-year-old males	To investigate the dispositional argument that job attitudes are consistent within individuals, showing stability both over time and across situations.	1. Significant stability of attitudes over a 5-year time period and significant cross-situational consistency when individuals changed employers and/or occupations were found. 2. Prior attitudes were also a stronger predictor of subsequent job satisfaction than either changes in pay or the social status of the job.
33	To & Tam (2014)	Quantitative	China	1,307 female workers	To investigate the generational differences in the work values, perceived job rewards, and job satisfaction of Chinese female migrant workers.	1. The results indicate that there are no generational differences in work values among the three birth cohorts of Chinese female migrant workers. The older generation felt more satisfied with the job rewards that they received, and their sense of job satisfaction was higher than that of the younger generation. 2. The findings showed a substantial positive influence of perceived social job rewards (such as support from co-workers and supervisors) on job satisfaction among the younger generation.
34	Traynor & Wade (1993)	Quantitative	USA	489 nurses	To develop and pilot a Measure of Job Satisfaction (MJS) that IS user-friendly, quick and simple to complete and suitable for use with community nursing staff.	The MJS that has been developed appears to have high reliability and validity with sufficient sensitivity to discriminate between various groups of community nurses.

35	Vandenbeele (2009)	Quantitative	Belgium	3506 responses.	To investigate whether the relationship between public service motivation (PSM) and performance is present in a dataset of Belgian civil servants.	The results corroborate the general thesis and demonstrate a mediation effect (to some extent) of job satisfaction and organizational commitment on this relationship.
36	Verplanken & Holland (2002)	Quantitative	The Netherlands	Study 1 - 40 undergraduate students Study 2 - 99 undergraduate students Study 3 - 105 undergraduate students Study 4 - 66 undergraduate students Study 5 - 75 undergraduate students Study 6 - 140 undergraduate students	To investigate the relationship between values and choices or behaviour.	The studies identified two important conditions for values to influence choices and behaviour: A value must be cognitively activated and should be central to an individual's self-concept.
37	Weiss & Cropanzano (1996)	Mixed methods	Global	NA	To introduce a theory of affective experience at work which emphasizes the role of work events	The study fleshed out a structure for an event-based approach to affective experiences at work and filled

					as proximal causes of affective reactions?	in some of the details by referring to the basic literature on emotions and moods.
38	Wild, Parsons & Dietz (2006)	Mixed methods	USA	200 California NPs with active licensure	To identify the demographics and job satisfaction levels of currently working nurse practitioners (NPs) in California.	1.The NPs reported high levels of job satisfaction according to the Mueller McCloskey Satisfaction Scale (MMSS). Aspects of the job that showed significant levels of satisfaction were schedules, flexibility of hours, and interprofessional relationships. 2. NPs were least satisfied with not having professional opportunities such as participation in nursing research, writing/publishing, and belonging to a department/nursing committee.
39	Willem, Buelens & De Jonghe (2007)	Quantitative	Belgium	764 non-managing nurses	To investigate the relationship between the organizational structure variables, formalization, centralization and specialization, and nurses' job satisfaction.	1. The results support the negative effect of centralization and the clearly positive effects of specialization and formalization on nurses' job satisfaction. These effects differ according to the different dimensions of satisfaction. 2. Pay is the most important dimension of nurse' job satisfaction but the dimension least influenced by organizational structure.
40	Young & Perrewe (2000)	Quantitative	USA	215 Hasselback's Directory of Management Faculty	To understand how the mentoring exchange is perceived and how perceptions of the exchange influence feelings about the relationship.	1. Findings indicate that when protégés are open to advice and coaching and put forth effort in accomplishing required work or projects, a mentor's perceptions of relationship effectiveness and trust felt for the protégé are positively influenced.

						2. When mentors engage in sufficient levels of social support behaviours to meet a protégé's expectations, a protégé will form higher perceptions of relationship effectiveness and trust for the mentor.
41	Zainalipour, Fini & Mirkamali (2010)	Quantitative	Iran	120 teachers	1. To analyse the correlation between organizational justice and job satisfaction. 2. To study the impact of organizational justice components as encompassed by three specific forms of justice perceptions; distributive justice, procedural justice, and interactional justice on job satisfaction.	1. Findings indicated significant positive relationships between organizational justice and job satisfaction. 2. Two dimensions of organizational justice namely, distributive and interactional justice had positive relations with four dimensions of job satisfaction namely supervision, co- worker, pay and promotion and they didn't have correlation with nature of job as a dimension of job satisfaction. 3. Procedural justice demonstrated a significant correlation for all dimensions of job satisfaction. 4. Multiple regression revealed significant impact of distributive justice and interactional justice with job satisfaction.
42	Dugguh & Dennis (2014)	Review	Nigeria	Global	To trace the relationship between job satisfaction and employee performance in organizations.	1. The paper adds to the theoretical debate on whether job satisfaction impacts positively on employee performance. 2. Although the concept of job satisfaction is complex, using appropriate variables and mechanisms can go a long way in enhancing employee performance.

43	Greenberg (1990)	Quantitative	USA	30 employees in university	To provide explanations on feelings of inequity.	The data support equity theory's predictions regarding likely responses to underpayment and extend recently accumulated evidence demonstrating the mitigating effects of adequate explanations on feelings of inequity.
44	Griffin, et al (2010)	Quantitative	USA	200 staff members from different specialist	To examine the association of job involvement, job stress, job satisfaction, and organizational commitment with burnout among correctional staff.	Job satisfaction had an inverse relationship with emotional exhaustion, depersonalization, and a sense of reduced accomplishment at work, whereas job stress had a significant positive relationship with depersonalization and emotional exhaustion. Job involvement also had a positive association with emotional exhaustion, whereas commitment to the organization had no relationship with any of the three dimensions of burnout.
45	Ali (2009)	Quantitative	USA	351 American Indian/Alaska native, 1690 Asian/Pacific Islander, 1500 African American, 869 Hispanic and 20,910 Whit from higher education faculty	To investigate, at a national level, the job satisfaction characteristics of higher education faculty of 5 different races.	1. The results of this study indicated some similarities and differences in job satisfaction characteristics of faculty by race. 2. The analyses indicate that where achievement, recognition and responsibility are measured in terms of publications, funded research and number of committees served, Asian/Pacific Islander faculty members performed better than other races in this study. These factors significantly contribute to faculty's intrinsic job satisfaction.

46	Barsade, et al (2003)	Review	Global	NA	To study the evolution of research within organizational behaviour (OB) affective scholarship	The early job satisfaction paradigm is being replaced by richer theory, stronger measures, more sophisticated methods, and most importantly, a broader understanding of affective constructs and how they influence organizational life.
47	Hegney, Plank & Parker (2006)	Quantitative	Australia	1477 nurses	To identify the intrinsic and extrinsic work values that were perceived by the members of the Queensland Nurses Union (QNU) in Queensland, Australia, to influence job satisfaction.	1. Intrinsic and extrinsic work values do impact upon job satisfaction and therefore intention to leave employment. 2. The results also indicate that work stress was high, and morale was low and decreasing.
48	Karimi, Malik & Hussain (2011)	Quantitative	Pakistan	101 employees	To examine the relationship of employee performance appraisal system (PER) and employee satisfaction (SAT).	1. There is a positive and significant relationship between employee performance appraisal system and their satisfaction. 2. There is no significant difference between male and female employees with respect to their performance appraisal and satisfaction. It confirms that the performance appraisal system in practice is fair enough to keep all the employees satisfied.
49	Locke & Latham (1990)	Review	Global	NA	To offer a coherent, data-based theory of work motivation and job satisfaction.	The resulting model is called the high-performance cycle. It dictates that high performance is achieved through four mechanisms, direction of attention and action, effort, persistence, and the development of task strategies and plans. High performance, if rewarding, leads to job satisfaction, which in turn facilitates commitment to the organization and its

						goals. The model has implications for leadership, self-management, and education.
50	McClelland (1993)	Review	Global	NA	To critically assess aptitude tests, their increased prevalence and acceptability as well as question whether they are they should be the sole determinates for university admissions.	The profile of achievements should be reported not only at entrance but at various points throughout the schooling to give teachers, administrators, and students feedback on whether growth in de- sired characteristics actually is occurring. Test results then become a device for helping students and teachers redesign the teaching-learning process to obtain mutually agreed-on objectives.

Appendix 3: Keyword Search Terms

Concept	Search words
1-Population	Academic health science professionals (OR) Academic nurses (OR) Academic doctors, Academic dentists (OR) Academic pharmacists (OR) AHPs (Allied Health Professionals) (OR) Academic dieticians (OR) Academic physiotherapists (OR) Academic OT (OR) Academic speech and language therapists (OR) Faculty health college staff (OR) Health care staff (OR) Academic health care professionals (OR) Health care academic professionals. **In King Saud University, the health science colleges include 6 main colleges: Dentistry, Colleges for emergency medical service, Medicine, Nursing, and Pharmacy. There is also Applied Medical, which includes 7 specialties: Biomedical Technology, Optometry and Vision Science (Optics - Optics specialists), Rehabilitation Sciences (Physical Therapy - Speech and Hearing - Occupational Therapy - Respiratory Therapy), Radiological Sciences, Dental Health (Dental Technology - oral and dental care), and Community Health Sciences, including specialist Clinical Nutrition, Health Education and Clinical Laboratory Sciences.
2- Comparator **(Job demands)**	Negative work environment (OR) Emotional Demands (OR) Cognitive Demands (OR) Physical Demands Work Load (OR) Work Pressure (OR) Role Overload (OR) Emotional Demands (OR) Time Pressure (OR) Role un-clarity (OR) Psychological Demand (OR) Moral Judgment (OR) Ethical Stress (OR) Ethical Distress (OR) Work Demand (OR) Organisation and Administration Demand (OR) Personnel Management (OR) Employee Discipline (OR) Pressure to Produce (OR) Employee Incentive Plans (OR) Low Motivation (OR) Social Support (OR) Conflict with Supervisor (OR) Conflict with Colleague (OR) Unclear Policy (OR) Destructive (OR) Job Bias (OR) Unfair Evaluation (OR) Employee Performance Appraisal (OR) Job Application (OR) Unclear Job Description (OR) Home-work (OR) Job Characteristics (OR) Management Quality (OR) Negotiating (OR) Personnel Delegation (OR) Personnel Downsizing (OR) Personnel un-loyalty (OR) Personnel Selection (OR) Personnel Staffing and Scheduling (OR) Salaries and Fringe Benefits (OR) Staff Development (OR) Strikes (OR) Workload (OR) Job Ladders (OR) Health Service's Needs and Demands (OR) Job Application Resume (OR) Job Training In-service (OR) Work Shortage (OR) Job Site (OR) Social Conditions (OR) Job Demands Control (OR) Job Design (OR) Work Place Incivility (OR) Organisational Culture Level (OR) Exposure to Psychosocial Factors (OR) Work Life Demand (OR) Role Ambiguity (OR) Work Related Injuries (OR) Work Family Conflicts (OR) Job Control and Psychological Strain(OR) Work Force Need (OR) Career Placement (OR) Job Challenges (OR) Job Perception (OR) Job Role Changes (OR) Job Capacity and Demand (OR) Unhealthy Life Style (OR) Stressful Work Environment (OR) Job Risk (OR) Control Overtime (OR) Workload Demands (OR) Work Ability and Competency (OR) Occupational and Socioeconomic Differences (OR) Job Technology Challenges (OR) Job Discrimination (OR) Attending and sharing in workshops and symposiums.
3-Comparator **(Job resources)**	Managerial support (OR) Sharing decisions (OR) Activity performance (OR) Job motivation (OR) Autonomy (OR) Job security (OR) Social support (OR) Interpersonal relationships (OR) Feedback (OR) Constructive feedback/Supervisor feedback (OR) Colleague support (OR) Salary (OR) Security (OR) Work resources (OR) Job control (OR) Work life Balance (OR) Resource Management (OR) Energy Resource (OR) Job planning (OR) Planning and Resources Development (OR) Resources Health Planning (OR) Health Resources (OR) Natural Resources (OR) Recruitment Resource (OR) Moral Motivation (OR) Job skills

	and Knowledge (OR) Job skills (OR) Job knowledge (OR) Work force and Job motivation (OR) Job safety (OR) Managerial support (OR) Supervisory support (OR) Coaching support (OR) Workshops (OR) Job Training (OR) Developmental Training programs (OR) Job Promotion (OR) Leadership (OR) Financial support (OR) Accommodation (OR) Human resources (OR) Health promotion (OR) Reassurance (OR) Rewarding (OR) Organisational accommodation (OR) Performance feedback (OR) Interpersonal support (OR) Support from colleagues (OR) Organisational support (OR) Control coping (OR) Decision involvement (OR) Physical support (OR) Psychological support (OR) Sharing Vision (OR) Opinion (OR) Team work (OR) Stimulate personal growth (OR) Learning and development (OR) Career opportunities (OR) Supervisor coaching (OR) Role-clarity (OR) Clear Job description (OR) Clear and fair evaluation (OR) Receiving feedback (OR) High-quality relationship with supervisor (OR) Work Variety Work Flow (OR) Decision sharing (OR) Involvement (OR) Appreciation (OR) Communication (OR) Co–workers (OR) Fringe benefits, Job conditions (OR) Nature of the work (OR) Organisation (OR) Personal growth (OR) Policies and procedures (OR) Promotion (OR) Opportunities (OR) Recognition.
4-Comparator **(Personal Resources)**	Personal recourse (OR) Personal competency (OR) Academic competency (OR) Higher Education personal resources (OR) Personal characteristics of faculty (OR) Emotional Intelligence (OR) Emotional Intelligence concept (OR) Social intelligence (OR) Emotional abilities (OR) Emotional management (OR) Emotional labour (OR) Self-assessment (OR) Self-awareness (OR) Interpersonal relationships (OR) Self-management (OR) Communication abilities (OR) Positive Emotions (OR) Emotional wellbeing (OR) Healthy work environment (OR) Managing work stressors (OR) Self-efficacy (OR) Self-esteem (OR) Optimism (OR) Positivity (OR) Creativity (OR) Dependency (OR) Empathy (OR) Individuality (OR) Self-esteem (OR) Self efficacy (OR) Resiliency (OR) Flexibility (OR) Self-control (OR) Self-understanding (OR) Self competency (OR) Self-confidence (OR) Personality (OR) Self-emotion (OR) Intelligence (OR) Self-control (OR) Mental health (OR) Mental process (OR) Mental Competency (OR) Human Rights (OR) Social Control (OR) Humanity (OR) Morals (OR) Ethics (OR) Social Justice (OR) Freedom (OR) Personal Communication (OR) Personality assessment (OR) Personality development (OR) Personality control (OR) Assertiveness (OR) Personal Character (OR) Leadership (OR) Personal experience (OR) Spiritual Resources (OR) Honesty (OR) Sincerity (OR) Trustworthy (OR) Wisdom (OR) Truthful (OR) Loyalty (OR) Kind-hearted (OR) Open minded (OR) Religious support (OR) Personal Coping (OR) Personal Adaptation (OR) Personal Productivity (OR) Personal Space (OR) Personal identity (OR) Personal Responsibility (OR) Self-mastery (OR) Self-belief (OR) Self-Truth (OR) Authenticity (OR) Integrity (OR) Humility (OR) Mind fullness (OR) Objectivity (OR) Self-reflection (OR) Self-courage (OR) Self confrontation (OR) Self-Connection (OR) Perspective (OR) Self learning (OR) Forgiveness (OR) Aspiration (OR) Self-balance (OR) Clarity (OR) Passion (OR) Happiness (OR) Enjoyment (OR) Harmony Attitude (OR) Humour (OR) Helpfulness (OR) Compassion (OR) Renewal (OR) Self expectation (OR) Encouragement (OR) Celebration (OR) Accuracy (OR) Self rewarding (OR) Achievement Compassion (OR) Self stability (OR) Emotional Adjustment (OR) Emotional Adaptation Communication skills (OR) Communication ability (OR) Communication competency (OR) Emotional quotient (OR) Personal success (OR) Emotional regulation (OR) Enhancement (OR) Understanding self (OR) Understand others' feelings (OR) Motivating the self (OR) Recognise emotion (OR) Managing other emotions (OR) Using emotion (OR) Transparency (OR) Adaptability (OR) Overcome the Obstacles (OR) Achievement (OR) Improving the self (OR) Initiative (OR) Inspirational leadership (OR) Influence (OR) Conflict management (OR) Building bond (OR) Team work and collaboration (OR) Personal competence (OR) Social competence (OR) Self-assessment (OR) Commitment (OR) Self values (OR) Self-capability (OR) Self-assurance (OR) Control the Direction of life (OR) Quick Decision making (OR) Coping (OR) Mange the impulsions (OR) Anger control (OR) Stress management (OR) Trustworthiness (OR) Consistencies (OR) Organise priorities (OR) Keep promises (OR) Fit with

	change (OR) Organisational awareness (OR) Ability to pursue and lead (OR) Appreciation of others (OR) Understanding others' views (OR) Understanding emotional boundaries (OR) Service orientation (OR) Correct delegation of the task and accountability (OR) Embracing different perspectives (OR) Respecting others (OR) Respecting others' views (OR) Task orientation (OR) Innovation.
5-Personal outcome (Stress outcomes)	Job satisfaction (OR) Job dissatisfaction (OR) Work satisfaction (OR) Work dissatisfaction (OR) Employee satisfaction (OR) Faculty satisfaction (OR) Academic satisfaction (OR) Motivation (OR) Wellbeing (OR) Positive emotion (OR) Encouragement (OR) Emotional outcomes (OR) Un-satisfaction (OR) Moral distress (OR) Work stress (OR) Distress (OR) Emotional distress (OR) Employee exhaustion (OR) Cynicism (OR) Fear (OR) Anxiety (OR) Work Anxiety (OR) Depression (OR) Autonomy (OR) Autonomous (OR) Self-efficacy (OR) Psychological Health Complaints (OR) Psychological Health Outcomes (OR) Fatigue (OR) Sleep disturbance (OR) Cognitive disturbance (OR) Cognitive failure (OR) Burnout (OR) Emotional depletion (OR) Work engagement(OR) Depersonalisation (OR) Achievement feeling (OR) Accomplished feeling (OR) Stress (OR) Anxiety (OR) Depression (OR) Emotional exhaustion (OR) Negative engagement (OR) Emotional disturbance (OR) Emotional adjustment (OR) Managing stress (OR) Job related anger (OR) Job related distress (OR) Mental fatigue (OR) Aggression (OR) Belonging (OR) Feeling of affiliation (OR) Distractive feeling (OR) Constructive feeling (OR) Irritability (OR) Sadness (OR) Defensiveness (OR) Anger (OR) Mood swings (OR) Hypersensitivity (OR) Apathy (OR) Slowed thinking (OR) Racing thoughts (OR) Feelings of helplessness (OR) Feeling of hopelessness (OR) Being trapped (OR) Emotional stability (OR) Happiness (OR) Emotional peace (OR) Mood stability (OR) Goal orientation (OR) Respire (OR) Despair (OR) Hopes (OR) Emotional involvement (OR) Negative emotions (OR) Emotional tolerance (OR) Emotional coping (OR) Emotional problems (OR) Emotional distress (OR) Cognitive outcomes (OR) Family conflict (OR) Sadness (OR) Emotional regulation (OR) Psycho-emotional status (OR) Moral adjustment (OR) Emotional mastery skills (OR) Emotional crises (OR) Aggression (OR) Agitation (OR) Excitation (OR) Passion (OR) Dispassion (OR) Negative expectation (OR) Detachment (OR) Disappointment (OR) Tension (OR) Negative Emotion (OR) Fear (OR) Enjoyment (OR) Wellbeing (OR) Emotional stability (OR) Pleasurable emotion (OR) Positive emotion (OR) Job Fatigue (OR) Psychological responses to jobs (OR) Cognitive (evaluative) response (OR) Affective (or emotional) response (OR) Effective feelings about the job (OR) Cognitive assessment (OR) Effective job satisfaction (OR) Emotional feelings about a job (OR) Degree of pleasure to a job (OR) Happiness (OR) Cognitive job satisfaction (OR) Logical evaluation of job degree (OR) Job satisfaction (OR) Psychological well-being (OR) Job fitting (OR) Job unfitting (OR) Bad mood (OR) Upset feeling (OR) Inferiority feeling (OR) Motivation (OR) Job tension (OR) Job frustration.
6-Outcome (Organisational Outcomes)	Organisational Outcomes (OR) Job Performance (OR) Job turnover (OR) Turnover Intention (OR) Job security (OR) Job engagement OR) Job withdrawal (OR) Job Absenteeism (OR) Job strain (OR) Sickness (OR) Burnout (OR) Academic job wellbeing (OR) Work resignation (OR) Job challenge (OR) Work related stress (OR) Positive outcome (OR) Negative outcome (OR) Belonging (OR) Commitment (OR) Incivility (OR) Sickness Absence (OR) Absenteeism (OR) Presence (OR) Intent to Stay (OR) Intent to Leave (OR) Professional Development (OR) Turnover (OR) Faculty Turnover (OR) Retention (OR) Work Commitment (OR) Physical Health Complaint (OR) Physical Health Outcome (OR) Work Detachment (OR) Work Behaviour (OR) Disengagement (OR) Over-commitment (OR) Work performance (OR) Positive Organisational Outcome (OR) Optimising goals (OR) Optimising aims (OR) Improving leadership (OR) Achieving goals (OR) Achieving wellbeing (OR) Enhancing performance (OR) Organisational Safety (OR) Rewarding (OR) Performance improvement (OR) Understanding

	Organisational systems and intervention (OR) Personal life qualification (OR) Demand overcome (OR) Optimising organisational outcomes (OR) Health outcomes (OR) Increasing sickness leave (OR) Physical health complaint (OR) Time management (OR) Wasting time (OR) Creating a healthy work life and place (OR) Organisational growth and development (OR) Integration of employee beneficial perspective (OR) Skills enhancement (OR) Voluntary turnover (OR) Financial outcome (OR) Employee motivation (OR) Productivity (OR) Positive outcomes (OR) Negative outcomes (OR) Employee (OR) Employee loyalty (OR) Contract accountability (OR) Work quality (OR) Work effort (OR)Organisational success (OR) Task performance (OR) Costs (OR) Organisational Strategies (OR) Organisational system (OR) Neglecting performance (OR) Meet organisational requirements (OR) Organisational justice (OR) Organisational citizenship behaviour (OR) Misbehaviour in organisations (OR) Consequences of organisational policy.

Appendix 4: QASSD Tool of Critical Appraisal

N	Criteria	0 = Not at all	1 = Very slightly	2=Moderately	3= Complete
1	Explicit theoretical framework				
2	Statement of aims/objectives in main body of report				
3	Clear description of research setting				
4	Evidence of sample size considered in terms of analysis				
5	Representative sample of target group of a reasonable size				
6	Description of procedure for data collection				
7	Rationale for choice of data collection tool				
8	Detailed recruitment data				
9	Statistical assessment of reliability and validity of measurement tool(s) **(Quantitative only)**				
10	Fit between stated research question and method of data collection **(Quantitative only)**				
11	Fit between stated research question and format and content of data collection tool e.g. interview schedule **(Qualitative)**				
12	Fit between research question and method of analysis				
13	Good justification for analytical method selected				
14	Assessment of reliability of analytical process **(Qualitative only)**				
15	Evidence of user involvement in design				
16	Strengths and limitations critically discussed				
Total					

Total/42 X 100 = %

Critical appraisal example of one review paper.

QATSDD: Work-to-family conflict as a mediator of the relationship between job satisfaction and turnover intention

N	Criteria	0 = Not at all	1 = Very slightly	2=Moderately	3= Complete
1	Explicit theoretical framework		.		Explicit statement of the theories as one hypothetical model that derived from theories but it old 1998.
2	Statement of aims/objectives in main body of report				Explicit statement of aims/objectives in main body of Report and also in the abstract.
3	Clear description of research setting				Specific description of the research problem and target population in the context of the study (200 nurses from 25 private nursing homes in Central Taiwan)
4	Evidence of sample size considered in terms of analysis				Description of full criteria of sample size selection (inclusive &exclusive)
5	Representative sample of target group of a reasonable size			Sample represent from 25 nursing home and explain how to select from each area	.
6	Description of procedure for data collection				Completed and detailed data including time, place, procedure and also ethical consideration
7	Rationale for choice of data collection tool				Related to tested variable in the study.
8	Detailed recruitment data				Completed and detailed data.
9	Statistical assessment of reliability and validity of measurement tool(s) **(Quantitative only)**				Completed. Validity, reliability and content analysis measured for each tool .

10	Fit between stated research question and method of data collection **(Quantitative only)**		Method of data collection can only address some aspect of hypothesis.		
11	Fit between stated research question and format and content of data collection tool e.g. interview schedule **(Qualitative)**	----------	----------	----------	----------
12	Fit between research question and method of analysis			Research result and analysis referring to answer some variable only.	
13	Good justification for analytical method selected			Fairly detailed and explanation	
14	Assessment of reliability of analytical process (Qualitative only)	----------	----------	----------	----------
15	Evidence of user involvement in design	No mention at all			
16	Strengths and limitations critically discussed			Discussion of some of the key strengths and weaknesses of the study but not complete (design and procedure not mentioned)	.
Total 33/42x100=78.57%		1(0)	1(1)	4(8)	8(24)

Appendix 5: Data Extraction - Example

Author /Year/study location, quality of paper	-Design and Data collection -Sample size --Sampling method	Tool (Reliability& Validity)	Research aim	Main findings	Theoretical approach	address concept: JD, JR, PR , WE, EO, OO	**Which RQ address**	Comments or limitations
BAKER, USA, California community colleges/ /2010/ 61.90%	A quantitative, descriptive, correlation survey design. Approximately 590 full-time ADN educators employed in 74public California community colleges were contacted via email. There were 176 responses (29.7 percent response rate) 139 met the inclusion criteria and completed the entire survey, A power analysis completed. prior to the data collection indicated a minimum sample of83 was needed to achieve 80 percent power to detect a small effect size (Burns & Grove, 2007). Faculty from 36 of the 74 colleges contacted. responded and are represented in the results	1-Spreitzer's (1995) Psychological Empowerment Scale (PES).; 12-item. a five-point numerical scale, Cronbach's alpha of .84, which is consistent with previously reported reliability estimates of .85 to .91. 2-Laschinger et al.'s (2001) Conditions of Work Effectiveness II (CWEQ-II): this scale measure Structural empowerment. This 19-item purposes. Cronbach's alphas of .60 to .82. 3-Hackman and Oldham's (1975) Job Diagnostic Survey (JDS): five-item Likert scales. In this study, the JDS had a Cronbach's alpha of .84, consistent with previous reports of .78 to .84.	To examine empowerment, job satisfaction levels, and relationships among 139 associate degree nursing educators.	Mean score test, Pearson product correlation coefficient test, and level test frequency of variance were used to compare the variables between two groups. Most educators were satisfied with their job and felt empowered in their work. In the nursing faculty, empowerment was the most common concept often applied as the most positive factor correlated with job satisfaction. Pearson product correlation coefficient was used to show a strong positive correlation between empowerment and JS (r=0.219, p=0.05). Increasing the faculty Empowerment predicted increasing in their job satisfaction	Empowerment theory, 1-Laschinger et al. (2001) structural empowerment model and 2-Spreitzer's (1995) psychological empowerment framework have not been examined together in the nurse faculty. population. create academic environments that foster faculty satisfaction and retention of nurse educators. in the workplace	**PR(**Empowerment**).** **EO (**job satisfaction)	**RQ2 RQ4**	The sample size (139) was adequate, but a larger sample size could have enhanced the results. The findings may not be generalised to other faculty settings, such as the private setting.

Appendix 6: The Summary of the 21 Included Studies

Author(s) Location	Qua-lity	Study Design	Sample & Response Rate	Data Collection Method	Type of Analyses Used	Type of Outcome	Key Findings	Comments
AL-Hussami et al. (2011) Jordan	76.19 %	Cross - sectional correlated design	N=122. 80.3% response rate.	Mailing tools	Stepwise linear regression analysis, Person correlation, ANOVA test, T-tests.	OO (Commit-ment)	There was a relationship between faculty commitment and organisational predictors. The main predictor to have the strongest influence on org. commitment was organisational support (JR) where Pearson correlation produced a significant correlation between support and commitment [r=0.69, P≤0.01]. There was also a positive correlation between workload (JD) and org. commitment [r=0.39, P≤0.01], a significant correlation between support and commitment [r(122)=0.69,P≤0.01, and positive correlation between and autonomy(JR) and org. commitment [r(122)=0.43,P≤0.01]. Compared to other predictors, pay had the least effect on commitment after org. support and autonomy. Pearson product-moment correlation produced a positive correlation between pay (JR)and org. commitment [r=0.42, P≤0.01].	The use of simple random sampling technique assumed that the population was typical and may therefore have had selection bias. Voluntary participation may have also contributed to bias (toward organisation demands or recourses as faculty member is part of organisation). Cross sectional may limit the exploration of predictors. However, the correlation gives the more direction about outcomes. Regarding response rate may limited the sample calculation method.

Baker et al. (2010) USA	61.90 %	Descriptive co-relational survey design	590 full time ADN (associated degree nurse educators) in 74 public California community colleges. 176 responses, but 139 met the inclusion criteria.	tools	Mean score test, Pearson product correlation coefficient test, and level test frequency of variance were used to compare the variables between two groups.	EO (Job Satisfaction)	Most educators were satisfied with their job and felt empowered (PR) in their work. In the nursing faculty, empowerment (PR) was the most common concept often applied as the most positive factor correlated with job satisfaction. Pearson product correlation coefficient was used to show a strong positive correlation between empowerment (PR) and JS (r=0.73, p=0.05).	The sample size (139) was adequate, but a larger sample size could have enhanced the results. The findings may not be generalised to other faculty settings, such as the private setting. Descriptive design may facilitate more elaboration of terminology and conceptualisation of variables.
Berent (2011) USA	54.76 %	Cross-sectional survey design	10,537 nurse faculty members emailed - 1,171 (11.7%) responses.	Online tools	Factor analysis used (data reduction method and classification method), mean test and Cronbach's alpha test.	OO (Intention to remain)	Descriptive factor analysis revealed that enjoying the academic work (PR) was the most significant factor to influence faculty retention (mean=4.5, SD=0.7-0.8). Management skills competency was one of the main three factors that influenced the faculty decision to remain in higher education. Mean range from 4.3 to 4.5, SD=0.8-0 and Cronbach's alpha was 0.82.	-It is a small response rate. -Recruitment procedure was detailed, and data reduction method utilised and covered by theoretical framework.
Berg et al. (2015) USA	80.95 %	Qualitative	16 faculty members.	Semi-structured interviews	MaxQDA Version 11 (Verbi GmbH, Berlin, Germany) was used to support analysis.	Work engage-ment	Most participants mentioned the organisation and colleagues' support JR (faculty development through programmes to help teachers to gain educational skills) was an important resource to work engagement. Some participants found the role conflict (JD affected their teaching role and interfered with their engagement in the work environment.	-Teachers with limited experience were not included in the study, which may have influenced the transferability. -The use of qualitative facilitates acknowledge the background experience of the faculty.

Birx et al. (2011) USA	64.28 %	Mixed method	n=29 faculty	Question-naires, Open-ended question-naire to reflect on retreat experienc e.	For quantitative: mean and T-test. One group present and post-test design with follow up. Content analysis was used to identify themes in the qualitative data.	EO (Job satis-faction)	**Quantitative part**: inferential analysis revealed a significant increase in pre-test/post-test scores on the job (t=.219, p<.05) in general score and group cohesion. That meant an increase in communication in group team led to an increase in JS. **Qualitative part:** communication in teamwork had a positive experience for participants and a positive effect on their JS. Five themes were identified in the team-building retreat program to assist the functioning of the retreat: getting to know each other better, seeing commonalities and differences, spending time together, developing trust, and working as a group. At the end of the semester, four major themes were identified: getting to know each other, feeling closer as a group, setting a friendlier tone for the semester, and experiencing the retreat as a positive experience.	Use of mixed method which enrich the research with both benefits of qualitative and quantitative as interpretation of qualitative design and numerical and statistical analysis standards of quantitative design. Using one group pre-test and post-test design through applying interview of faculty that may give weight and strength.
Dankoski et al. (2011) India	83.33 %	Mixed method	N=1.355 564 responses (44%).	Online question-naires	**For quantitative**: A linear regression used to investigate the fit of the model. **For Qualitative**: Constant comparative method.	EO (Job satis-faction) and work engage-ment	Career life management was a stronger predictor for job satisfaction and work engagement. Inferential linear regression analysis was used to reveal that for JS (coefficient 0.40(p<.001) and for WE (coefficient ranging from (0.44 to 0.57, p<0.001). Increasing the life career management predicted an increase in JS and WE.	Study was limited to only one institution that influenced the generalisation. All items were self-reported that may be more subjectivity and lacking objectivity of interpretation because the result come from the participants point of view.
Del Líbano (2012) Spain	54.76 %	Mixed method	n=386	Online question-naires	Multivariate Analyses of Variance used, such as descriptive analyses; computed Harman's	EO (Job satis-faction),	Self-efficacy related positively to JS, organisational commitment and work engagement, but related negatively to workload. A high work self-efficacy	The results were derived from self-reporting, and consequently may be contaminated by common

					single factor test with Confirmatory Factor Analyses (CFA). AMOS was employed to implement Structural Equation Modelling (SEM) methods by using Maximum Likelihood Estimation methods to establish the relationships between the model variables.	OO (commit-ment) and Work engage-ment	related positively to positive outcomes (org. commitment) β =.48, p<.001 and relative positivity, but indirectly with job satisfaction via increases in the work engagement at β =.86, p<.001, but there was a negative relationship between workaholism (working excessively) and JS at β =-.34,p<.001. Multivariate analyses of the variance showed that SE related positively to work engagement (Vigour, Dedication, Absorption), β=.40, p<.001.	method variance in the data and by the subjectivity of answers. Good recruitment of clear criteria and procedure in multistage process.
Derby-Davis (2014) USA	69%	Descripti ve correlatio n design	300 nurse faculty members invited to participate, but n=127 response (45% response rate).	Self-adminis-tered survey	Data analysis by using descriptive Mean test. Multiple regression analyses also used.	OO (intention to remain)	High motivational factors were a strong predictor to increase the nurse faculty intention to remain in academia. There was a significant positive relationship between motivational factors and intent to stay (r=.58, p<.01).	The selection of the convenience sample may have resulted in sampling bias; also the generalisation of findings to other nursing faculties in the USA.
Guan et al. (2014) China	83.33 %	Cross-sectional Question-aire survey	N=700 faculty members, but 581 responses.	Question-naire survey	Path coefficient of mediators was used for analyses.	EO (Job satis-faction) OO (Job perform-ance).	There was a relationship between perceived organisation support and job performance that was medicated by job satisfaction. Also, the justice contributed to perceived organisational support (POS). This positively predicted job performance at 0.25 (p<.001). It also directly predicted job satisfaction at 0.60 (p.001). High POS contributed to an increase in the job satisfaction and job performance.	The sample was not sufficiently large to have several relationships between factors. The sample was from only one region of China, which may have limited the generalisation of results. Procedure of data recruitment was clearly stated.
Gutierrez et al. (2012) USA	54.76 %	Cross-sectional correlated design.	Sample was 4886 of the nursing faculty. 1453 responded - 30% response rate.	Question-naires	Descriptive statistics, zero-order correlations and (SPSS) Statistics 17 software used to analyse data.	EO (Job satis-faction) and	Individual and organisational values can increase the levels of affective and normative commitment. Structural regression coefficient was shown to be the direct and indirect effect of WV on normative commitment (NC);	low response rate. Sample size is not considered according to statistical calculation. Cross sectional design handicaps the view of concepts progressively or

					The structural equation modelling (SEM) was also used to explore the hypothesised relationships among the constructs in the present study.	OO (commit-ment)	not a significant result, p >0.05. Also, the greater the compatibility between the individual and the organisation, the greater the attraction to become more committed. PPOF (perceived personal organisation fitness) had a significant direct effect on normative commitment (NC), but indirect on affective commitment AC (β=0.12, p.0.01). POS had significant direct effects on normative commitment (NC), but significant indirect effects upon affective commitment AC (β=0.80, p<0.001) that were mediated by global satisfaction, normative commitment, person organisation, fitness and development experience. Perceived org. support (POS) was that an employee who felt more attached to an organisation would become more committed to it. POS was observed to have a significant effect on global job satisfaction (GJS) (β=0.79, p<0.001).	regressively but correlative design enhance the significance of explored terms and concepts.
Isaac et al. (2014) USA	57.14 %	Qualitative	34 faculty members.	Semi-structured interview	The interviews were digitally audio-recorded, transcribed verbatim, then the content analysed.	EO (Job satis-faction)	Unbalanced negotiations perceived as negative that affected the faculty performance and their satisfaction.	All participants from one institution that non lifting their academic setting and from one ethnicity and race, all these factors may affect the generalisation of results. Lack of role model of relating the family responsibilities with career requirements. Purposeful sample and qualitative design add rich experience of faculty and may

								help of conceptualisation of terms.
Lane (2010) USA	76.19 %	Qualitative	The sample was drawn from 23 community colleges in Florida. The numbers of population varied depending on the size of the school and their nursing program.	Open ended Qs	Thematic analysis after data were coded according to common themes and patterns and placed into categories.	EO (Job satis-faction) and OO (Intention to remain)	The nurse faculty members in community colleges in Florida were satisfied and intent to stay was related to different factors. 72 nurse faculty members responded and most of them felt unsatisfied, when comparing their hours of work to their compensation and income, which interfered with their intention to remain in academia. 50% of respondents felt the academic policies were appropriate and clear for everyone and they were satisfied with that; the other 50% felt the academic policies for the faculty were vague and inconsistent. Most faculty members reported satisfaction within their relationships in their workplace, that they were professionals and were respectful, fair, open-minded and supportive. Love of teaching was a positive theme. Most of the nurses in the faculty enjoyed their job which increased their job satisfaction and intention to remain respondents felt their salaries were low in regard to their composition, especially when compared to hours of work that negatively influenced their intention to stay, and their satisfaction.	Sample only included the ADN faculty in the state of Florida, which led to a lack of generalisation. The sample was representative but not proportionate which may influence the study generalisation. A couple of the questions were open-ended, resulting in a decreased number of respondents answering the question.
Mahoney et al. (2011) USA	64.28 %	Cross-sectional and correlation	890 faulty emailed but 598 completed the online survey.	Online-questionnaires	Mean test and ANOVA test. A path analysis was conducted testing two models of emotional labour.	EO (Emotional exhaustion, job	Path analysis revealed that genuine positive emotion had a negative path to emotional exhaustion at -.31, but a significant positive effect to JS at .24 and to affective commitment at 0.15.	The study was cross-sectional and correlational, and therefore neither the causality nor the directionality between variables could be concluded.

						satisfaction) and OO (Commit-ment)	Increasing in positive EL predicted an increase in JS and commitment, but a decrease in emotional exhaustion.	The study was based on self-reporting, which may have an individual perception bias. Sample represent various faculty strata (from teacher to professors) however, the limitation of that the contextual differences in universities was not examined.
Navarro et al. (2010) Spain	54.76 %	Quantitative	193 professors	Question-naires	LISREL 8.71 was used in data analysis. Mean test.	EO (Stress symptoms, Emotional exhaustion)	Increasing the faculty overload predicted more stress symptoms (t=6.16) via increasing emotional exhaustion (t=7.82).	Omission of some effective variables, such as coping skills, that could have a greater number of correlations. The sampling procedure was random that the number of participants was controlled in term of working sectors, campus and sex (proportional fixing).
Tourangeau et al. (2012) Canada	52.38 %	Qualitative descriptive exploratory study	37 participants divided into 6 focus groups.	Focus group interview	Thematic analysis strategies were used.	EO (Job satisfaction) and OO (intention to remain)	Analysis of the factors influencing the nurse faculty ITR (intention to remain). The nurse faculty's participants in the focus group described the leadership climate as a positive and open environment, having open discussion, supportive relationships, acceptance of ideas, and trust and receptiveness that positively influenced their job satisfaction and their ITR. Some participants of the focus group felt that autonomy was one of the job resources to make them happy, having a positive influence on their satisfaction with their academic job.	The study may have a bias, because the participation in the focus group was via the Dean and Director, which affected the decisions.

Tourangeau (2013) Canada	52.38 %	Cross-sectional survey design	1,328 nurse faculty members, who were surveyed. - 650 participated.	Questionnaires	Simultaneous multiple regression and standards coefficient (β).	OO (intention to remain)	Higher and good quality relationships at work were reported that were associated with higher nurse faculty ITR for the next five years. Regression analyses were conducted; the work relationship variable was found to be one of the eight that had parameters estimated to be statically significant at 0.05 level, β =.129. Nurse faculty ITR for the next five years associated with greater balancing work and life that were statically significant at, β =.112, p-value=.024. Support was not a statically significant parameter to predict faculty ITR, β =.059P-value=.296), as well as autonomy was not a statically significant parameter to predict faculty ITR, β =.034, p-value=.389.	Statistical calculation for the sample size was not mentioned however the response was sufficient for statistical and data analysis. Cross sectional design may limit elaboration part of responses perspective or retrospectively.
Tourangeau et al. (2014) Canada	57.14 %	Cross-sectional descriptive survey design	Population N=1329 of nurse faculty, respondent was n=650	Mailed surveys	Chi-squared test is used.	OO (intention to remain)	Nurse faculty found a decrease in their workload encouraged them to remain in academia. Descriptive statistics rated and ranked the unmanageable workload as the top one in the disincentive independence factors for the nurse faculty to remain. Chi-squared test was conducted =74.8 (p value=0.072 non-significant), but having supportive colleagues was selected by more than 70% of the sample as an incentive factor to remain employed. Chi-squared test was done at 76.3, P value=0.243 non-significant. A supportive director/dean was ranked as the first factor to remain employed.	A large number of statistical tests may have increased the risk of typing errors. Sample size for some categories (not representative sample for all strata). Result may generalise only to the educational organisation that have similar structures, policies and setting. The incentive and disincentive factors were applied on focus group that may not reflect the faculty perception as global.

							The Chi-squared test did not show a significant result, (p value=0.205). Being able to experience work-life balance was selected as one of the top six incentives independent factors to remain employed by more than 70% of the sample. The result of Chi-squared test was significant at 70.6 (P value=0.004).	
Wang (2015) Mexico	64.28 %	Quan-titative	n=33,168	Self-reporting survey	Descriptive F statistic test.	EO (Job satis-faction)	Results showed that increasing salary and highly org. support contributed to the most job satisfaction. The correlation between salary and job satisfaction was significant at 0.47 but was a marginal significance with org. support at 2.60.	Collated data via self-reporting may hold some errors or bias. The study design was not clear. Old and insufficient subsample of national study of postsecondary faculty NSOPF:4 was used to certain extent it limits the selection of variance. Some statistical procedure such as back ward, forward and stepwise were used while the common procedures are SAS and SPSS that may limits the more statistical elaboration and interpretation.
Watanabe (2016) USA	69.04 %	Cross-sectional design	n=559 faculty.	Questionn aires	Mean test, correlation between variables and ordering logistic regression for the multivariate analysis.	OO (turnover intention)	Work-related demands and resources appeared to be more important factors in work–family turnover intentions. Correlation between the variables and ordering logistic regression showed high supportive work was associated with	Drawing a sample from only one university limited the generalisability of the results. Using of cross-sectional design may prohibit the study from making causal claims.

							lower turn-off intentions (OR=.79, p<.05).	using the single item may handicap the reporting reliability of dependent variables.
Winefield (2014) Australia	69.04 %	Cross-sectional design	Sample was 3,326 who responded to online survey - From 13 universities.	Online Question-naires	1- Descriptive statistics and variable inter-correlations, and Mean test. 2- Zero order correlation. 3- Factor analyses to examine the structure of measures. 4- Structural equation modelling (SEM) with the maximum likelihood method of estimation.	EO (psycho-logical strain) OO (Product-ivity)	Analysis of the structured model revealed that most staff reported more work pressure that was correlated positively to an increase in their psychological strain β=.06, p<.05, and negatively correlated to a decrease in their productivity at β =-.07, p<.05). An increase in the faculty autonomy correlated with decreasing their strain at β= -.27, p<.05, and related to an increased commitment outcome at β =.05 and increasing the productivity outcome at β=.25.	Representative sample of 13 university with lager no of participants which included sex may give more strength of research results. Cross sectional may limit the exploration and generalisation of results because it conducted in specific time, but the research may enhance this gap with the correlation design that give more details of direction and relations of variables.
Yamani et al. (2014) Iran	59.52 %	Cross-sectional correction al design	N=385 individuals, but 142 filled out the questionnaires.	Question-naires	Pearson correlation coefficient, t-test, analysis of variance (ANOVA) and linear regression analysis (α=0.05).	EO (Job stress)	There was an inverse correlation between the EI components, and the job stress levels (r=-0.235, p=o.005). Linear regression analysis revealed that EI factors explained approximately 7% of the variance of job stress levels. Increasing the EI related to decreased job stress levels by better management of emotion and avoiding negative emotions, such as hopelessness and anxiety.	Self-assessment emotional intelligent questionnaires were used that may participants have changed their responses to represent their desired image. The cross sectional and correlative method may affect the generalisability and interpretation of the results. Good statistical calculation of sampling size.

Appendix 7: Tables of RQ4 - Example

Research Q4 B: Relationship between JD, JR, PR and SO

JD, PR, JR	Relationship results between **SO** and (**JD, JR, PR)**		
	Work Stress **Strain**	**Emotional Exhaustion**	**Job Satisfaction (JS)**
JD			
Work overload	**Navarro (2011):** Linear regression analysis tests showed that indirect effects were on stress symptoms (t=6.16). Increasing the faculty overload predicted more stress symptoms via increased emotional exhaustion.	**Navarro (2011):** Linear regression analysis tests on increasing emotional exhaustion showed that the strongest direct significant effect was high overload (t=7.82).	
Work pressure	**Winefield (2014)**: Analysis of the structural model revealed that most staff members reported more work pressure that was correlated positively to increase their psychological strain β=.06, p<.05.		
Hours of work or Workaholism			**Del Libano (2012):** As the result of inferential analyses, there was a negative relationship between workaholism (working excessively) and JS at β =-.34, p<.001. Increasing in hours worked led to a decrease in JS. **Lane (2010): Qualitative study**: 72 nurse faculty members responded and most of them felt unsatisfied when comparing their hours of work to their compensation and income. Some of the faculty wanted to include the hours of preparation for the lectures in their workload.

Work policies			**Lane (2010): Qualitative study**: 50% of the participants felt that the policies were appropriate and clear for everyone, and they were satisfied with that; the other 50% felt that the policies were too vague and inconsistent and came from administration without engaging the faults in the decision-making or formulation of the policies, such as teaching style and seclusion. Some faculty members felt that the students had more control or influence than them in the policies, which made them unsatisfied.
PR			
Work relationship			**Lane (2010): Qualitative study**: An analysis of the participants' answers showed that most of the faculty reported satisfaction within relationships in their workplace, that they were professionals and considered it as respectful, fair, open-minded and supportive. Most of the faculty developed their close friends from work and did not like to lose them. **Birex (2011):** **- Quantitative part:** An inferential analysis revealed a significant increase in general scores at ($t=.219$, $p<.05$) of JS and group cohesion. This showed that the mean increased communication in group teams led to increased JS. **-Qualitative part**: communication in teamwork gave a positive experience for participants and a positive effect on their JS. Five themes were identified in the team-building retreat programme to ascertain the function of the retreat: getting to know each other better, seeing commonalities and differences, spending time together, developing trust, and working as a group. At the end of the semester, four major themes were

			identified: getting to know each other, feeling closer as a group, setting a friendlier tone for the semester, and experiencing the retreat as a positive experience.
Love and enjoying work			**Lane (2010): Qualitative study**: Love of teaching was a positive theme. Most nurse faculty members enjoyed their job, which increased their feeling of job satisfaction.
Self-efficacy			**Del Libano (2012):** As the result of inferential analyses, high self- efficacy related positively, but was indirect with job satisfaction at $\beta = .86$, $p < .001$. High self-efficacy predicted high job satisfaction via an increase in the work engagement.
Empowerment			**Baker (2011):** Pearson product correlation coefficient was used to show a strong positive correlation between empowerment and JS (r=073, p=0.05). High empowerment was associated with an increase in job satisfaction.
Emotional labour		**Mahoney (2011**): To test the EL model by using path analysis revealed that genuine positive emotion of EL had a negative path to emotional exhaustion at -.31. Increasing EL led to a decrease in emotional exhaustion.	**Mahoney (2011**): To test the EL model by using path analysis showed that a significant positive path led from genuine positive emotions to JS at .24. Increasing EL led to an increase in job satisfaction.
Emotional Intelligence (EI)	**Yamani (2013):** Self-awareness and self-management were the two components of emotional intelligence to be better predictors to reduce stress by more efficient management of emotions and avoidance of negative emotions, such as hopelessness and anxiety. Pearson correlation coefficient was shown as an inverse correlation between EI components and the level of job stress (r=-0.235, p=o.005). Linear regression analysis revealed that EI factors explained approximately 7% of the variance of job stress levels. Increasing the EI related to a decrease in the job stress levels.		

JR			
Org. or director support			**Guan (2015)**: Using the analyses of path coefficient of mediators showed that perceived organisational support (POS) positively and directly predicted JS confidently =0.60 (p,.001). JS was also considered to be a mediator between POS and job performance. High POS contributed to an increase in job satisfaction. **Gutierrez (2012**): Perceived org. support (POS) was for an employee who felt more committed to the organisation. Structural regression coefficient presented all direct and indirect effects of the variables. POS was observed to have a significant direct effect on global job satisfaction (GJS) (β=0.79, p<0.001). **Al-Hussami (2013):** The Pearson correlation produced a significant correlation between support and JS, r=0.62. High support showed an increase in faculty satisfaction. **Tourangeau (2012)**: **Qualitative study:** The nurse faculty members who participated in the focus group described the leadership climate as a positive and open environment, having open discussions, supportive relationships, and acceptance of ideas, as well as trust and receptiveness that positively influenced their job satisfaction. **Lane (2010): Qualitative study**: Some of the respondents felt satisfied because their supervisor gave the space of freedom to do their work comfortably; they were very supportive and gave them help when they needed it. Most of them felt unsatisfied because their supervisors over-managed and were generally annoyed, while they were always

			busy, which made it difficult to ask them for support or help.
Autonomy	**Winefield (2014**): Factor analyses and hypothesised model testing showed that autonomy correlated negatively with psychological strain β= -.27, p<.05. Increasing the faculty autonomy correlated with decreasing their strain.		**Tourangeau (2012): Qualitative study**: Some participants of the focus group from the nursing faculty felt the autonomy of one job resource made them happy; it was enjoyable and had a positive influence on their satisfaction with their academic job.
Pay and rewards			**Lane (2010): Qualitative study**: The faculty responded negatively and showed they were unsatisfied when asked about salary. They felt the compensation was low compared with their efforts and long, hard work in academia.
Work/life balance or management.			**Dankoski (2011):** Inferential linear regression analyses were used to reveal that satisfaction and career life management was a stronger predictor (coefficient 0.40 (p<.001). Increasing life career management predicted increasing in JS.

Appendix 8: Question Appraisal System (QAS-99): Coding Form

INSTRUCTIONS. Use one form for EACH question to be reviewed. In reviewing each question:

1) WRITE OR TYPE IN QUESTION NUMBER. ATTACH QUESTION.

Question number or question here: **Q1)**

2)Proceed through the form - Circle or highlight YES or NO for each Problem Type (1a... 8).

3)Whenever a YES is circled, write detailed notes on this form that describe the problem.

STEP 1 - READING: Determine if it is difficult for the interviewers to read the question uniformly to all respondents.	
1a. **WHAT TO READ**: Interviewer may have difficulty determining what *parts* of the question should be read.	YES NO
1b. **MISSING INFORMATION**: Information the interviewer needs to administer the question is *not* contained in the question.	YES NO
1c. **HOW TO READ**: Question is *not* fully scripted and therefore difficult to read.	YES NO
STEP 2 - INSTRUCTIONS: Look for problems with any introductions, instructions, or explanations from the *respondent's* point of view.	
2a. **CONFLICTING OR INACCURATE INSTRUCTIONS**, introductions, or explanations.	YES NO
2b. **COMPLICATED INSTRUCTIONS**, introductions, or explanations.	YES NO
STEP 3 - CLARITY: Identify problems related to communicating the *intent or meaning* of the question to the respondent.	
3a. **WORDING**: Question is lengthy, awkward, ungrammatical, or contains complicated syntax**.**	YES NO
3b. **TECHNICAL TERM(S)** are undefined, unclear, or complex.	YES NO
3c. **VAGUE:** There are multiple ways to interpret the question or to decide what is to be included or excluded.	YES NO
3d. **REFERENCE PERIODS** are missing, not well specified, or in conflict.	YES NO
STEP 4 - ASSUMPTIONS: Determine if there are problems with assumptions made or the underlying logic.	
4a. **INAPPROPRIATE ASSUMPTIONS** are made about the respondent or about his/her living situation.	YES NO

4b. **ASSUMES CONSTANT BEHAVIOR** or experience for situations that vary.	YES NO
4c. **DOUBLE-BARRELED**: Contains more than one implicit question.	YES NO
STEP 5 - KNOWLEDGE/MEMORY: Check whether respondents are likely to *not know* or have trouble *remembering* information.	
5a. **KNOWLEDGE** may not exist: Respondent is unlikely to *know* the answer to a factual question.	YES NO
5b. **ATTITUDE** may not exist: Respondent is unlikely to have formed the attitude being asked about.	YES NO
5c. **RECALL** failure: Respondent may not *remember* the information asked for.	YES NO
5d. **COMPUTATION** problem: The question requires a difficult mental calculation.	YES NO
STEP 6 - SENSITIVITY/BIAS: Assess questions for sensitive nature or wording, and for bias.	
6a. **SENSITIVE CONTENT** (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behavior.	YES NO
6b. **SENSITIVE WORDING** (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.	YES NO
6c. **SOCIALLY ACCEPTABLE** response is implied by the question.	YES NO

Appendix 9: Findings of the Cognitive Testing using the (QEEW-2) Across Participants

QEEW-2	Participant 001	Participant 002	Participant 003	Participant 004	Participant 005	Participant 006	Participant 007	Participant 008	Participant 009	Participant 010
A-Independence in your work ***(Job autonomy)***										
1-Do you have freedom in carrying out your work activities?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-Can you decide how your work is executed on your own?	✓	Probing used, explain then answer	She said ambig-uous, probing used then answer	✓	✓	✓	✓	✓	✓	✓
3-Can you personally decide how much time you need for a specific activity?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-Can you organise your work yourself?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B-Pace and amount of work										
1-Do you have too much work to do?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-Do you have to work extra hard in order to complete something?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you have to hurry?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-Do you find that you are behind in your work activities?	✓	✓	✓	✓	✓	Asked about meaning of behind and inter-preted as late	✓	✓	✓	✓
5-Do you have problems with the work pace?	✓	Ask about pace then probe used	✓	✓	✓	✓	✓	✓	✓	✓
6-Do you have problems with the work pressure?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C-Emotional load ***(Emotional workload)***										

1-Does your work demand a lot from you emotionally?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-Are you confronted with things that affect you personally in your work	Vague, think but answer	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you have contact with difficult customers or patients in your work?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-In your work, do you have to be able to convince or persuade people?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-Does your work put you in emotionally upsetting situations?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D-Mental load *(Mental workload)*										
1-Do you have to work with a lot of precision?	Interpret the pre-cision as precise then answer probe Q used	✓	✓	✓	Asked what you mean by pre-cision, probe used	✓	✓	Asked what you mean by pre-cision, probe used then explain	✓	✓
2-Does your work require continual thought?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you have to give continuous attention to your work?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-Does your work require a great deal of carefulness?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E-Physical effort										
1-In your work, are you seriously bothered by having to lift or move loads?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-Do you find your work physically strenuous?	✓	✓	✓	✓	✓	✓	✓	Exp-lained strenuous as under physical tension then answer	Exp-lained strenuous from stress	✓

3-Does your work require physical strength?	✓	✓	✓	✓	✓	✓	✓	✓	Confused but answer	✓
F-Problems with work *(Role conflicts)*										
1-Do you have to do things in your work that you dislike?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-Do you receive contradictory instructions?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you have to do your work in a way which differs from the method of your choice?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-Do you have to do work which you would rather not do?	✓	She said I don't under-stand, then answer	✓	✓	✓	✓	✓	✓	✓	✓
5-Do you have conflicts with your superior about the content of your tasks?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
G-Relationship with your superior *(Relationship with supervisor)*										
1-Can you count on your superior when you come across difficulties in your work?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-If necessary, can you ask your superior for help	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you get on well with your superior?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-Do you have conflicts with your superior?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-Is there a good atmosphere between you and your superior?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-Have there been any unpleasant occurrences between you and your superior?	✓	✓	✓	Ask about the meaning of un-pleasant (not clear)	✓	✓	✓	✓	✓	✓
H-Relationships with colleagues										

1-Can you count on your colleagues when you encounter difficulties in your work?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-If necessary, can you ask your colleagues for help?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-Do you get on well with your colleagues?	✓	✓	✓	✓	✓	What is the mean of well? then answer as mean no conflict or agree with them	✓	✓	✓	✓
4-Do you have conflicts with your colleagues?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-Is there a good atmosphere between you and your colleagues?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-Have there been any unpleasant occurrences between you and your colleagues?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
I-Career development and support										
1-This organization offers me sufficient educational possibilities for my current work	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-I am satisfied with my possibilities for developing towards a higher function in the future.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-I receive sufficient support for my career development	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
J-Remuneration(pay)										
1-This organization pays good salaries.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-I can live comfortably on my pay.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-I am paid enough for the work I do.	✓	✓	Probing used then explain	✓	✓	✓	✓	✓	✓	✓

			and answer							
K-Involvement in the organization *(Organizational commitment)*										
1-I find that my own views correspond closely to those of the organization.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-I really feel very closely involved with this organization.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-I feel very at home working for this organization.	✓	Asked what the meaning is of at home, probe used then answer	✓	✓	✓	✓	✓	✓	✓	✓
4-I have put so much of myself into this organization that I would find it extremely hard to leave.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-With respect to this organization, I really feel obliged to stay on several more years.	✓	✓	✓	✓	✓	✓	✓	asked about to obligate and exp-lained as I am not sorry to go	✓	Asked about to obligate and exp-lained as agree or refuse and said if it is mean refused, I am agree
6-Working for this organization is very appealing in comparison with most other jobs that I could get.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
L-Working in this orgnisation										
1-Considering everything, as an employee I am satisfied working in this organization.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*✓= Participant has no problem in answering the question

Appendix 10: Findings of the Cognitive Testing using the (TEIQue-30) Across Participants

(TEIQue) -30 items	Participant 001	Participant 002	Participant 003	Participant 004	Participant 005	Participant 006	Participant 007	Participant 008	Participant 009	Participant 010
1. Expressing my emotions with words is not a problem for me.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. I often find it difficult to see things from another person's viewpoint.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. On the whole, I'm a highly motivated person.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. I usually find it difficult to regulate my emotions.	✓	Mis-match	✓	✓	✓	✓	✓	✓	✓	✓
5. I generally don't find life enjoyable.	✓	✓	Mismatch	✓	✓	✓	✓	✓	✓	✓
6. I can deal effectively with people.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7. I tend to change my mind frequently.	Mis-match									
8. Many times, I can't figure out what emotion I'm feeling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9. I feel that I have a number of good qualities.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10. I often find it difficult to stand up for my rights.	Mis-match	✓		✓	✓	✓	✓	✓	✓	✓
11. I'm usually able to influence the way other people feel.	✓	✓	Asked influence is positive or negative, explain then had 2 answers	✓	✓	✓	✓	✓	✓	✓
12. On the whole, I have a gloomy perspective on most things.	✓	✓	Gloomy is not clear	✓	✓	✓	✓	Asked about gloomy is positive or negative then explained as good	✓	✓
13. Those close to me often complain that I don't treat them right.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

14. I often find it difficult to adjust my life according to the circumstances.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15. On the whole, I'm able to deal with stress.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16. I often find it difficult to show my affection to those close to me.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17. I'm normally able to "get into someone's shoes" and experience their emotions.	✓	✓	Think take time, explain then answer	✓	✓	✓	✓	✓	✓	Take time to think but answer
18. I normally find it difficult to keep myself motivated.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19. I'm usually able to find ways to control my emotions when I want to.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
20. On the whole, I'm pleased with my life.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21. I would describe myself as a good negotiator.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22. I tend to get involved in things I later wish I could get out of.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
23. I often pause and think about my feelings.	✓	✓	give explain to pause as stop then answer	✓	✓	✓	✓	✓	✓	✓
24. I believe I'm full of personal strengths.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25. I tend to 'back down' even if I know I'm right.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26. I don't seem to have any power at all over other people's feelings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27. I generally believe that things will work out fine in my life	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28. I find it difficult to bond well, even with those close to me.	Hesitate but answer	✓	✓	Mis-match	✓	✓	✓	✓	✓	✓
29. Generally, I'm able to adapt to new environments.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30. Others admire me for being relaxed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*✓= Participant has no problem in answering the question.

Appendix 11: Findings of the Cognitive Testing using the (ITR-13) Across Participants

ITR-13	Participant 001	Participant 002	Participant 003	Participant 004	Participant 005	Participant 006	Participant 007	Participant 008	Participant 009	Participant 010
1-I would lose more than I gain if I changed my profession as a nurse educator in academe	Think but answer	Think but answer	Think but answer	✓	✓	✓	✓	✓	✓	✓
2-I have invested too much of myself in nursing education to consider changing professions	✓	✓	Think, explain but answer	✓	Think, explain and answer	✓	✓	✓	✓	✓
3-I plan to continue my career in nursing education.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-I have other options, but they are not as attractive as working as a nurse educator in academe	Think but answer	✓	✓	Think, give explanation for her answer	✓	✓	✓	✓	Think, give explanation for her answer	✓
5-Leaving my position as a nurse educator in academia would have many negative consequences	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-The sense of success that I receive from working with students keeps me working as a nurse educator in academe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7-I would miss the academic environment if I left nursing education	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8-The autonomy that I have as a nurse educator would be lost if I left academia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9-I would miss the flexibility of my work schedule if I left nursing academe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10-I would miss the opportunity to participate in research if I left nursing academe	✓	✓	Think, explain and answer	✓	✓	✓	✓	✓	✓	✓

11-I would miss the interactions with my colleagues if I left nursing academe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12-I plan to remain in academia beyond my retirement years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13-If I had to redo my career choices, I would choose nursing academe again	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*✓= Participant has no problem in answering the question

Appendix 12: Missing Items for Scales

Scale /subscale	No of Missed Items	Participant code (ID)	Dealing with Missing Data
QEEW2 - Job autonomy	item 4 item 4 item3 item 4 item 4 item 4 item 4 item 3	001 002 004 007 022 030 031 033	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Pace and amount of work	item 10 item 6 item 10 item7 item8	001 004 030 033 036	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Emotional workload	item 11 item14 item 13 item 15 item 15 item 15 item 12 item 13 missed all	002 019 026 027 030 032 034 039 036	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Mental workload	item 19 item 19 item 16	006 011 020	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Physical effort	item 22 missed all item 20 missed all	002 007 034 039	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Role conflicts	item 24 item 26 missed all	002 007 026	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.

QEEW2 - Relationship with supervisor	missed all item 28	026 036	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Relationships with colleagues	item 34,39 item 37 item 38 missed all item 38 item 39	002 009 019 026 031 039	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *3); and this fraction is multiplied by 100.
QEEW2 - Career development and support	item 42 item 41 missed all	002 010 026	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *4); and this fraction is multiplied by 100.
QEEW2 - Remuneration – pay	missed all	026	The missing data is not included.
QEEW2 - Organisational commitment	missed all item 48	026 035	The missing data is not included, but the scoring is, as this questionnaire's instructions are a calculation of the amount of points divided by (number of items answered *4); and this fraction is multiplied by 100.
QEEW2 - Working in this organization	missed all	026	The missing data is not included.
TEI - Well-being	item (12) item (5,11) All items	035 039 026	Replaced by mean 6+7+7+6+7=33/5=6.6 Not included Not included
TEI - Self-control	item (19, 22) All items	039 026	Not included Not included
TEI – Emotionality	item (8) item (13) item (28) item (17) item (16) item (16,17) all items	002 004 007 016 027 039 026	Replaced by mean 3+4+6+6+3+3+3=28/7=4 Replaced by mean 6+7+2+6+2+1+4=28/7=4 Replaced by mean 4+2+5+7+6+5+5=34/7 =4.85 Replaced by mean of that subscale-3.57 Replaced by mean 4+6+5+6+5+6+6=38/7=5.42 Not included Not included
TEI – Sociability	item (11) item (21) item (26) item (6) all items	002 024 027 039 026	Replaced by mean 4+4+3+5+6=22/5 = 4.4 Replaced by mean 7+ 7+1+7+7=25/5=5. Replaced by mean 6+4+6+5+4=25/5=5. Not included Not included

GSE - Total Score	5 missing	002	Not included
	all missed	026	Not included
	item 4	036	Replaced by mean =3.1
MBI – EX	missed all	016	Not included
	item 4	003	Replaced by mean
	item 6	004	Replaced by mean
	item 6	035	Replaced by mean
	item 6	039	Replaced by mean
MBI – CY	item 9	039	Replaced by mean
	item 14	024	Replaced by mean
	missed all	016	Not included
MBI – PE	missed all	016	Not included
	item 11	002	Replaced by mean
	item 11	027	Replaced by mean
	item11	039	Replaced by mean
	missed all	016	Not included
WEMWBS - Total Score	items 2,7,10	040	Not included
	items 8,13	037	Not included
UWES – VI	missed all	016	Not included
	missed all	025	Not included
UWES – DE	missed all	016	Not included
	missed all	025	Not included
UWES – AB	missed all	016	Not included
	missed all	025	Not included
	missed all	016	Not included
ITR - Total Score	item 12	010	Replaced by mean
	item 4	028	Replaced by mean
JDI - People Score	item 18	027	Replaced by 1
	item 13	028	Replaced by 1
	missed all	016	Not included
JDI - Job Score	item 16	027	Replaced by 1
	item 9	030	Replaced by 1
	missed all	016	Not included
JDI - Work Score	missed all	016	Not included
	item 1,6	027	Replaced by 1
	item 13	038	Replaced by 1
JDI - Pay Score	missed all	016	Not included
	item 3	027	Replaced by 1
JDI - Promotion Score	missed all	016	Not included

JDI - Supervision Score	missed all item 6,7,8,13	016 026	Not included Not included

Appendix 13: Criteria of Decision Making about which Piloted Scale will be used in the Main Study

Questionnaire	Theoretical background or literature drive	Pattern and number of missing items	Statistical analysis result: - Correlation (Pearson Correlation) - T-test	Psychometrics characteristics (Reliability: Cronbach alpha)
Job Demands				
Workload				
QEEW2 (Emotional load) subscale-5items	JD-R model	9 randomly	Significant positive correlation with MBI -ex, r =.371*	.876
QEEW2 (Mental load) subscale-4 items	JD-R model	7 randomly	No significant correlation with any of the stress outcomes The mean in female is more and significant than the mean of male.	.816
QEEW2 (Physical effort) subscale-3 items	JD-R model	8 randomly	-Significant positive correlation with MBI -ex, r= 444** -Significant negative correlation with JDI-pay, r= -.344* The mean in female is more and significant than the mean of male.	.773
Workaholism				
QEEW2 (Pace and amount of work) subscale-6 items	JD-R model	5 randomly	Significant positive correlation with MBI -ex at r=.427** The mean in female is more and significant than the mean of male.	.825
Role Conflict				
QEEW2 (Role conflict) subscale-5 items	JD-R model	7 randomly	Significant positive correlation with MBI -ex at r=.496** Significant positive correlation with MBI -Cy at r=.449** Significant negative correlation with JDI-job at general, r= -.358*	.858

			Significant negative correlation with JDI- present work at r= -.488** Significant negative correlation with JDI- pay r= -.473** Significant negative correlation with JDI- promotion at r= -.500** Significant negative correlation with JDI- supervision work a, r= -.432**	
Job Resources				
Autonomy				
QEEW2 (Job autonomy) subscale-4 items	JD-R model	8 randomly	Significant negative correlation with UWES-DE, r= -.345* The mean in male is more and significant than the mean of female.	.646
Pay				
QEEW2 (Pay) subscale-3 items	JD-R model	3 randomly	No significant correlation with UWES The mean of less than 40 years old is more and significant than the mean of more. The mean of less than 10 years' experience years is more and significant than the mean of more than 10 years' experience	.901
Support (org. support & col. support)				
QEEW2 (Relationship with superior) subscale-6 items	JD-R model	7 randomly	Significant negative correlation with UWES-Vi, r=-.469** significant negative correlation with UWES-DE, r=-.421*	.697
QEEW2 (Relationship with colleague) subscale-6 items	JD-R model	12 randomly	Significant negative correlation with UWES-Vi, r=-.495**	.628
QEEW2 (Carrier development and support) subscale-3items	JD-R model	5 randomly	Significant negative correlation with UWES-Vi, r=-.430** Significant negative correlation with UWES-DE, r= -.561**	.878
Personal Resources				
EI				
TEIQue-SF - Well-being subscale-6 items	Developed tools by (Petrides, 2009) using Hypothesised model	12 randomly	Significant positive correlation with UWES-Vi, r=.510**	.644
TEIQue-SF Self-control subscale-6 items	Developed tools by (Petrides, 2009) using	14 randomly	Significant positive correlation with UWES-Vi ,r=474**	.279

	Hypothesised model			
TEIQue-SF - Emotionality subscale-8 items	Developed tools by (Petrides, 2009) using Hypothesised model	23 randomly	No significant correlation with UWES	.433
TEIQue-SF - Sociability subscale-6items	Developed tools by (Petrides, 2009) using Hypothesised model	16 randomly	Significant positive correlation with UWES-Vi, r=.392* Significant positive correlation with UWES-DE ,r=.379*	.306
Self-Efficacy				
GSE scale - 10 items	-Social cognitive theory (SCT; Bandura. 1997),	10 randomly	No significant correlation with UWES The mean in female is more and significant than the mean of male.	.874
Stress Outcomes				
Burnout				
(MBI-GS) - EX subscale-5 items	Emerged from literature JD-R model	5 randomly	No significant correlation with ITR	.902
(MBI-GS) - CY subscale-5 items	Emerged from literature JD-R model	5 randomly	No significant correlation with ITR	.725
(MBI-GS) - PE subscale-6 items	Emerged from literature JDR JD-R model	6 randomly	No significant correlation with ITR Mean of less than 40 years old is more and significant than older than 40 years.	.812
Mental Health Wellbeing				
WEMWBS scale-14 items	Developed by the NHS Health Scotland, University of Warwick and University of Edinburgh, 2006 Hypothesised model	14 randomly	Significant positive correlation with ITR ,r= .467**	.928
Job Satisfaction			No significant correlation with ITR	
JDI-People (co-worker) subscale-18 items	Emerged from literature, it supports the theory of Smith, Kendall, and Hulin (1969) of job satisfaction	18 randomly	Significant positive correlation with ITR ,r=.321*	.926
JDI-Job in general subscale-18 items	Emerged from literature	18 randomly	No significant correlation with ITR	.904

JDI-Work on present Job subscale-18 items	Emerged from literature	18 randomly	Significant positive correlation with ITR, r=363*	.875
JDI-Pay subscale-9 items	Emerged from literature	9 randomly	Significant positive correlation with ITR, r=.324* The mean of more than 40 years old is more and significant than the mean of less than 40 years. The mean of more than 10 years' experience years is more and significant than the mean of less than 10 years' experience.	.746
JDI-Promotion subscale-9 items	Emerged from literature	9 randomly	No significant correlation with ITR. The mean of more than 10 years' experience years is more and significant than the mean of less than 10 years' experience.	.804
JDI-Supervision subscale-18 items	Emerged from literature	22 randomly	No significant correlation with ITR. Mean of less than 40 years old is more and significant than more than 40 years old. The mean of more than 10 years' experience is more and significant than the mean of less than 10 years' experience.	.906
Engagement				
Work engagement				
UWES-Vigour subscale-3 items	JD-R model emerged from literature	6 randomly	Significant positive correlation with ITR, r=.444**	.498
UWES-Dedication subscale-3 items	JD-R model emerged from literature	6 randomly	Significant positive correlation with ITR at.461** The mean of more than 40 years old is more and significant than the mean of less than 40 years. The mean of more than 10 years' experience is more and significant than the mean of less than 10 years' experience.	.878
UWES-Absorption subscale-3 items	JD-R model emerged from literature	6 randomly	Significant positive correlation with ITR, r =.349*	.722
Commitment				
QEEW2 - Commitment subscale-6 items	JD-R model	7 randomly		.904
ITR				
ITR scale-13 items	Emerged from literature, developed by	13 randomly		.879

	(Derby, 2014) using the Herzberg's Motivation–Hygiene Theory			

Appendix 14: Test of Normality for all Scale-Sub-scale Scores

Scale/Subscale Score	Shapiro-Wilk		
	Statistic	df	Sig.
QEEW2 - Job autonomy	.947	39	.063
QEEW2 - Pace and amount of work	.966	39	.282
QEEW2 - Emotional workload	.958	39	.151
QEEW2 - Mental workload	.883	38	<.001
QEEW2 - Physical effort	.940	37	.046
QEEW2 - Role conflicts	.953	38	.112
QEEW2 - Relationship with supervisor	.927	38	.017
QEEW2 - Relationships with colleagues	.977	38	.601
QEEW2 - Career development and support	.959	38	.179
QEEW2 – Remuneration	.957	38	.156
QEEW2 - Organizational commitment	.958	38	.158
QEEW2 - Working in this organisation	.828	38	<.001
TEI - Total Score	.969	37	.375
TEI - Mean Score	.969	37	.375
TEI - Well-being	.961	37	.214
TEI - Self-control	.953	37	.119
TEI – Emotionality	.964	37	.279
TEI – Sociability	.982	37	.798
GSE - Total Score	.956	38	.141
GSE - Mean Score	.956	38	.141
MBI – EX	.969	38	.368
MBI – CY	.921	38	.011
MBI – PE	.912	38	.006
WEMWBS - Total Score	.957	38	.156
UWES – VI	.933	37	.028
UWES – DE	.782	37	<.001
UWES – AB	.883	37	.001
ITR - Total Score	.977	38	.620
JDI - People Score	.866	38	<.001
JDI - Job Score	.778	38	<.001
JDI - Work Score	.879	38	<.001
JDI - Pay Score	.942	38	.050
JDI - Promotion Score	.943	38	.053
JDI - Supervision Score	.842	38	<.001

Appendix 15-A: Cronbach's Alphas for the Scales

Questionnaires	Cronbach's Alpha
QEEW2	0.954
TEIQue	0.804
GSF	0.874
MBI	0.825
UWES	0.861
WEMWBS	0.928
JDI	0.963
ITR	0.879

Appendix 15-B: Cronbach's Alphas for Sub-scales

Questionnaires	Cronbach's Alpha
QEEW2:	
Job Autonomy	.646
Pace Amount Work	.825
Emotional Load	.876
Mental Load	.816
Physical Strength	.773
Role Conflict	.858
Relation With Supervisors	.697
Relation With Colleague	.628
CAREER DEVANDSUP	.878
Pay	.901
Organisational Commitment	.904
Satisfaction Working IN Organisation	ONLY ONE ITEM
TEIQue-SF:	
Wellbeing	.644
Self-control	.279
Emotionality	.433
Sociability	.306
JDI:	
PEOPLE	.926
JOBS	.904
WORKS	.875
PAY	.746
PROMOTION	.804
SUPERVISION	.906
MBI:	
Emotional Exhaustion (EX)	.902
Cynicism (CY)	.725
Professional efficacy (PE)	.812
UWES:	
Vigour	.498
Dedication	.878
Absorption	.722

Appendix 16: Approval from University Research Ethical Committee (UREC) from UOD for Pilot Study

University of Dundee

University of Dundee Schools of Nursing & Health Sciences and Dentistry Research Ethics Committee (SREC)

University of Dundee
Dundee
DD1 4HJ

22 February 2019

Dear Alya,

Application Number: 2018021_Alghamdi

Title: Individual and Work Environment Factors that Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

I am writing to advise you that your ethics application has been reviewed and approved independently by reviewers on behalf of the SREC.

If your project data can be linked to an identifiable individual, you must notify the University Data Protection Officer, Mr Alan Bell a.z.bell@dundee.ac.uk.

Approval is valid for three years from the date of this letter. Should your study continue beyond this point, please request a renewal of the approval.

Any changes to the approved documentation (e.g., study protocol, information sheet, consent form) must be approved by this SREC.

Yours sincerely

Andrew Symon

Dr Andrew Symon
Convenor, Schools of Nursing & Health Sciences and Dentistry
Research Ethics Committee

Appendix 17: Approval of institutional Review Board from KSU for Pilot Study

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جامعة الملك سعود
King Saud University

عمادة البحث العلمي

Ref. No. :KSU-HE-19-119

Researcher. Aiya Alghamdi

Lecturer PhD student

Subject: Research Project No. KSU-HE-19-119

Project Title: " Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement and Intention to Remain "

Dear. Alghamdi

With reference to the approval of the institutional Review Board (Human and Social Researches) Meeting 24 held on 5th March 2019, regarding the above mentioned subject, please be informed that the institutional Review Board of king Saud University has confirmed the approval of your project.

We wish you the best of success with your research endeavors.

Sincerely yours,

Prof. Ahmad Salem Alameri

Vice Rector for Graduate Studies and Scientific Research

Chairman, Institutional Review Board (KSU)

٤/٦٧/٢٨٨١٧٣
١٤٤٠/٧/١٦

Appendix 18: Participant Information Sheet for Pilot Study (a- cognitive testing)

PARTICIPANT INFORMATION SHEET

For the Pilot Study

A-Cognitive Testing

Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement And Intention to Remain

Invitation to take part in a research study

My name is Alya Alghamdi and I would like to invite you to participate in my research study. I am a PhD student researcher in the School of Nursing and Health Sciences at the University of Dundee, supervised by Dr.Linda McSwiggan Dr. Janice Rattray, and Professor. Elham Fayad.

You are invited to participate in the first phase of the study: cognitive testing of a range of questionnaires. The purpose of the study is to identify the personal and work-based factors associated with intention to remain among faculty members in Saudi Arabian Colleges of Nursing. Before you decide to take part, it is important that you understand firstly why the research is being conducted and what it will involve. Please take your time to read the following information, and carefully consider whether you want to take part. Please ask the researcher or 'champion involved in this study whether there is anything that is not clear or whether you would like more information.

What is the aim of study?

The aims of this study are to identify the personal and work environment characteristics associated with intention to remain (ITR) in higher education (HE) nursing facilities within Saudi Arabia. To do this, participants will be asked to complete a number of questionnaires. Some of these have not been used within a Saudi or Middle Eastern context. Therefore, it is essential to pilot the proposed measures among the Saudi nursing faculties before applying them in the main study. This pilot phase will be conducted through two elements: **A-Cognitive testing** and B-Pilot testing.

What is the aim of the cognitive testing?

The purpose of cognitive testing is to: a) test participants' understanding of the study questionnaires' items of that were not applied in their setting previously; b) enable the

researcher to examine participants' understanding of research terminologies; and c) investigate any problems that respondents may have during the completion of the questionnaires

Why have I been invited?

You are being asked to participate as you are a faculty member who has been working in a nursing college, and thus, identified as eligible to participate as volunteer for the interview of cognitive testing as apart in this pilot study.

Do I have to take part and what about the terms for withdrawal?

It is entirely your decision whether to participate in the study or not. You will be provided with this information sheet to keep and be asked to sign a consent form for the cognitive testing interview that includes audio recording. If you agree to take part, you will sign and add your contact details to the distributed consent and return it as the returned method in order to enable the research to contact you and determine best time for you for the interview, If you decide to take part you are still free to withdraw at any time and without providing a reason. A decision to withdraw at any time, or a decision not to take part, will not influence your work as a faculty member in your institution.

What should I expect?

If you agree to be a volunteer in this cognitive testing interview, you will be asked to sign written consent for your agreement to participate in the cognitive interview prior the interview. It will involve you in one-to-one interview, together with asking you the filling of the questionnaires as part of interview. The researcher will ask you to loudly read each question of the questionnaires and answer. This will help to identify potential problems that lead to difficulties in the questionnaire's completion, as well as the structure and clarity of items from the questionnaires, The questionnaires to complete are:

a) To assess the workload, workaholism, work conflict, support, pay, Autonomy and commitment using Questionnaire on the Experience and Evaluation of Work (QEEW.2) (van Veldhoven., 2015).
b) To assess emotional intelligence using (TEIQue) by Petrides, K. V. (2009).
c) To assess intention to remain (ITR) using (Nurse Educators' Intent to Stay in Academe Scale) by Derby-Dives (2014).

When you complete the filling the questionnaires you will hand it to the researcher.

The interviews will be audio recorded and written notes if needed will be taken by researcher in order to identify accurate content that will be used for data analysis.

What about time of interview, and place?

The estimated time to the interview with complete these questionnaires will be approximately 30-60 minutes, although it may take less or more time, depending on the individual. The study's interview time and place will be designated when you agree and contact the researcher. The interview will be at the same place of participants in their colleges during their working hours' time.

What if there is a risk or any problem?

There is a potential risk that may be the distress arises when you are filling out the questionnaires during the interview, if you feel that, I would like to advise you to seek help as you're the local occupation policy.

You have to ensure that the data information will be used only for the study purpose and will provide no more utilisation for other purposes and other research, and without any harm or exploitation of any participant

If you have a concern about conduct of this research, you should may contact the chair of the ethics committee in the School of Nursing and health sciences in the University of Dundee (Dr Andrew Symon a.g.symon@dundee.ac.uk) .

Who will disclose, use and/or receive my personal information (confidentiality /anonymity)?

All personal information which is collected regarding you during the course of the research will be kept strictly confidential and only the researcher and supervision team may have access to this. Any information about you (name, phone number, and locations) that is obtained from you either during the interview or through the questionnaires will be anonymised for publication purposes (e.g. report, research paper, conference, presentation) so that you cannot be recognised from it. All study data will be kept separately from the consent forms and personal contact information, so that no connection can be made between the data and your personal identify. Personal contact information (e.g. name, phone number, etc.) will be stored as a hard copy separately in a secure location for at least 5 years after the study has ended.

If you decide to withdraw from the study, all identifiable data will be withdrawn; however, any unidentifiable data already collected prior to your withdrawal will be retained and used in the study.

University Research Ethics Committee of the University of Dundee as well as the Ethical Committee of King Saud University at the Higher Education Institute, Saudi Arabia, will examine the potential ethical issues. It is a requirement for any researcher at both sites to have ethical approval before conducting the study. Once the results are ready, the researcher intends to publish them in a journal, so that healthcare professionals or faculties can benefit from the results. At the end of the study, results will be disseminated to the key stakeholders.

The study has been organised and supervised by the School of Nursing and Health Sciences, University of Dundee, Scotland, UK.

****If you are interested in becoming a volunteer in the interview of the cognitive testing stage**:

If you agree to be a volunteer for the one-to-one interview, please take two days to think then if you decided , please add your contact details (Phone number and Email address) to the provided consent form after sign it then place it in the closed envelope and consequently please return it to the sealed box that is located in the main staff room. Then, the researcher will contact you by the phone or email to arrange the time and place for interview with you.

How do I contact the researcher for further information?

Thank you for taking time to consider taking part in this study. If you would like to find out more about it, please contact:

Alya ALghamdi, Researcher, Department of Nursing and Health Sciences, University of Dundee – Scotland. I can be contacted in any of the following ways: Email: aalghamdi@dundee.ac.uk, OR aalgamdii@ksu.eu.sa.

Alternatively,

Prof. Elham Fayad by Email:efayad@ksu.edu.sa (Professor in mental health nursing, King Saud University, Nursing College), who will be happy to discuss the research with you.

"The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study."

Thank you for taking the time to consider taking part in this study.

Appendix 19: Participant Information Sheet for Pilot Study (b- pilot testing)

PARTICIPANT INFORMATION SHEET

For the Pilot Study

B-Pilot Testing stage

Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement And Intention to Remain

Invitation to take part in a research study

My name is Alya Alghamdi and I would like to invite you to participate in my research study. I am a PhD student researcher in the Nursing School at the University of Dundee, supervised by Dr.Linda McSwiggan, Dr. Janice Rattray, and Prof. Elham Fayad.

You are invited to take part in a pilot test of a research study that will identify the personal and work-based factors that associated with intention to remain among Saudi Arabian nursing faculties. Before you decide to take part, it is important that you understand firstly why the research is being conducted and what it will involve. Please take your time to read the following information, and carefully consider whether you want to take part. Please ask the researcher or 'champion involved in this study whether there is anything that is not clear or whether you would like more information.

What is the aim of the main study?

The aims of this study are to identify the personal and work environment characteristics associated with the intention to remain (ITR) in higher education (HE) nursing facilities within Saudi Arabia by using eight questionnaires. These will help to inform how well these questionnaires are accepted by nursing faculties in a Saudi context, which assess the predictors and outcomes, although they have not been used previously within Saudi Arabia. Therefore, it is essential to pilot the proposed measures among the Saudi nursing faculties before applying them in the main study. This pilot phase will be conducted through two elements: A-Cognitive testing and **B-Pilot testing**. You are asked to participate in B – Pilot testing.

What is the aim of the Pilot Testing?

The pilot testing will: a) test the acceptability and practicality of measurement utilisation within a Saudi Arabian context; b) test recruitment techniques and procedures to enhance participation; c) test the feasibility of undertaking the research; and d) identify issues of concern

for the main study, such as whether the allocated time for field work will be sufficient to recruit a suitable sample for the main study (Redsell & Cheater, 2001).

Why have I been invited?

You are being asked to participate as you are a faculty member who has been working in a nursing college, and thus, identified as eligible to participate in this pilot study.

Do I have to take part and what about the terms for withdrawal?

It is entirely your decision whether to participate in the study or not. If you decide to take part you are still free to withdraw at any time and without providing a reason. A decision to withdraw at any time, or a decision not to take part, will not influence your work as a faculty member in your institution.

What should I expect?

If you agree to take part in this study, it will involve you completing the questionnaires outside of your working hours and will be in your free time. The questionnaires to complete are:

a) A questionnaire to assess the workload, workaholism, work conflict, support, pay, and Autonomy, and commitment using Questionnaire on the Experience and Evaluation of Work (QEEW.2) (van Veldhoven, 2015).
b) A questionnaire to assess emotional intelligence (TEIQue) by Petrides, K. V. (2009).
c) A questionnaire to assess self-efficacy using (Generalized Self Efficacy scale) by Schwarzer and Jerusalem (1995).
d) A questionnaire to assess emotional exhaustion (burnout) using The Maslach Burnout Inventory (MBI) Maslach & Jackson (1986)& Seisdedosn (1997).
e) A questionnaire to assess the mental health aspects using Warwick-Edinburgh Mental Well-being Scale (WEMWBS).
f) A questionnaire to assess and job satisfaction levels using The JDI Job Descriptive Index and JIG and Job in general by (Balzer et al., 2009).
g) A questionnaire to assess work engagement using (Utrecht Work Engagement Scale UWES) by Schaufeli, Bakker & Salanova (2006).
h) A questionnaire to assess intention to remain (ITR) using (Nurse Educators' Intent to Stay in Academe Scale) by Derby-Dives (2014).

You will also be asked certain socio-demographic characteristics' background questions in relation to your age, gender, marital status, location, department, academic level, experience duration. Once you have finished completing the questionnaires, you will retain them in the sealed box which will be located in the main staff room in a safe place.

We do not anticipate that there will be any disadvantages or risks if you choose to participate in the study. The information gathered may not benefit you directly, but I sincerely hope that it will help individuals with similar situations in the future.

What about time of commitment, and place?

The estimated time to complete these questionnaires will be approximately 30-60 minutes, although it may take less or more time, depending on the individual. The study's questionnaires

will be distributed by the designated ‘champion’ at the same place of participants in their colleges during their working hours’ time.

What is the method of returning the completed questionnaires? And for how long?

If the participants complete the questionnaires, they will return them in the sealed box that is located in the main staff room in a safe place. The questionnaires will be left with the participant for two weeks as a maximum time, in order to have sufficient time to fill and return them in the box.

What if there is a risk or any problem?

There is a potential risk that may be the distress arises when you are filling out the questionnaires, if you feel that, I would like to advise you to seek help as per the local occupational health policy.
If you have a concern about conduct of this research, you should may contact the chair of the ethics committee in the School of Nursing and health sciences in the University of Dundee (Dr Andrew Symon a.g.symon@dundee.ac.uk) .

Who will disclose, use and/or receive my personal information (confidentiality /anonymity)?

All personal information which is collected regarding you during the course of the research will be kept strictly confidential. Any information about you through the questionnaires will be anonymised for publication purposes (e.g. report, research paper, conference, presentation) so that you cannot be recognised from it. Personal contact information (e.g. name, phone number, etc.) will be stored as a hard copy separately in a secure location for at least 5 years after the study has ended

If you decide to withdraw from the study, all identifiable data will be withdrawn; however, any unidentifiable data already collected prior to your withdrawal will be retained and used in the study.

University Research Ethics Committee of the University of Dundee as well as the Ethical Committee of King Saud University at the Higher Education Institute, Saudi Arabia, will examine the potential ethical issues. It is a requirement for any researcher at both sites to have ethical approval before conducting the study. Once the results are ready, the researcher intends to publish them in a journal, so that healthcare professionals or faculties can benefit from the results. At the end of the study, results will be disseminated to the key stakeholders.

The study has been organised and supervised by the School of Nursing and Health Sciences, University of Dundee, Scotland, UK.

How do I contact the researcher for further information?

Thank you for taking time to consider taking part in this study. If you would like to find out more about it, please contact:

Alya ALghamdi, Researcher, Department of Nursing and Health Sciences, University of Dundee – Scotland. I can be contacted in any of the following ways: Email: aalghamdi@dundee.ac.uk, OR aalgamdii@ksu.eu.sa.

Alternatively,

Prof. Elham Fayad by Email:efayad@ksu.edu.sa (Professor in mental health nursing, King Saud University, Nursing College), who will be happy to discuss the research with you.

"The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study."

Thank you for taking the time to consider taking part in this study.

Appendix 20: Consent Form for Pilot Study (a- cognitive testing)

Consent Form for Cognitive test (pilot study)

Title: Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

Please tick the appropriate boxes	**Yes**
Taking Part	
I have read and understood the Participant information sheet	☐
I have been given the opportunity to ask questions about the project.	☐
I agree to take part in the study.	☐
I understand that my taking part is voluntary; I can withdraw from the study at any time, and I do not have to give any reasons for why I no longer want to take part.	☐
I understand that my words may be quoted in publications, reports, web pages, and other research outputs.	☐
I understand that any personal information about you (name, phone number, and locations) that is obtained from you either during the interview or through the questionnaires will be anonymised. so that you cannot be recognised from it.	☐
Use of the information I provide beyond this project	
I agree for the data I provide will be treated in strict confidence and held securely for at least 5 years in a locked cabinet in a locked office room at King Saud university, Riyadh	☐

,KSA and will only be available to the research team. The information will be destroyed thereafter.[1]

I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form. ☐

I give permission that personal information (e.g. telephone number) will be used by the researcher only to contact me. Then will be stored as hard copy separately in a secure location for at least 5 years after the study has ended. ☐

I understand that other genuine researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form. ☐

I give permission that the interview part will be audio recorded. ☐

Name of participant [printed]	Signature	Academic rank	Phone number	Email	Date

Project contact details for further information: Alya Alghamdi ,+966565555093, Email: aalgamdii@ksu.edu.sa.

Appendix 21: Approval from University Research Ethical Committee (UREC) from UOD for Empirical Study

University of Dundee

University of Dundee Schools of Nursing & Health Sciences and Dentistry Research Ethics Committee (SREC)

University of Dundee
Dundee
DD1 4HN

20 December 2019

Dear Alya,

Application Number: UoD\SNHS\RPG\2019029

Title of Project: Individual and Work Environment Factors that Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

I am writing to advise you that your ethics application has been reviewed and approved on behalf of the University of Dundee Schools of Nursing & Health Sciences and Dentistry Research Ethics Committee (SREC).

Any changes to the approved documentation (e.g., study protocol, information sheet, consent form) must be approved by this SREC before the changes are implemented. Requests for amendments should be requested using the Post-Approval Request for an Amendment form.

Approval is valid for the duration of the project, as stated in the original application. Should you wish your study to continue beyond the stated project end date, you must request an extension to this approval using the Post-Approval Request for an Extension form. The extension request must be lodged during your period of study and the period requested must not extend beyond the deadline for submission of your research project.

Yours sincerely

Andrew Symon

Dr Andrew Symon
Convener, Schools of Nursing & Health Sciences and Dentistry
Research Ethics Committee

Appendix 22: Approval of institutional Review Board from KSU for Empirical Study

المملكة العربية السعودية
ص.ب 2454 الرياض 11451
www.ksu.edu.sa

جامعة الملك سعود
King Saud University
عمادة البحث العلمي

Ref No: KSU-KSU-HE-19-464

سعادة الباحثة/ علياء عطية محمد الغامدي حفظها الله

السلام عليكم ورحمة الله وبركاته

إشارة إلى توصية اللجنة الفرعية لأخلاقيات البحوث الإنسانية والاجتماعية في جلستها الرابعة عشر بتاريخ ١٤٤١/٤/١٣هـ، الموافق ٢٠١٩/١٢/١٠م.

نفيدكم بموافقة اللجنة الدائمة لأخلاقيات البحث العلمي على إجراء البحث الموضح بالجدول الآتي:

م	اسم	البحث	الأداة	الحالة
١	علياء عطية محمد الغامدي	"العوامل الفردية وعوامل بيئة العمل المؤثرة على السلامة النفسية، الاندماج والرغبة في البقاء لدى أعضاء هيئة التدريس بكلية التمريض "	استبانة	الموافقة

وعليه نأمل من الجهات المعنية بالجامعة تسهيل مهمة الباحثة.

وتفضلوا بقبول وافر الاحترام

عميد البحث العلمي

نائب رئيس اللجنة الدائمة لأخلاقيات البحث العلمي

أ.د محمد بن إبراهيم الوابل

صورة إلى سكرتير اللجنة الدائمة لأخلاقيات البحث العلمي

٤/٦٧/١٨٤٢١٤
١٤٤١/٤/٢٨

Appendix 23: Participant Information Sheet for Cross-sectional Study

PARTICIPANT INFORMATION SHEET (Cross-sectional)

Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement And Intention to Remain

Invitation to take part in a research study

My name is Alya Alghamdi and I would like to invite you to participate in my research study. I am a PhD student at the School of Nursing and Health Sciences, University of Dundee, supervised by Dr. Linda McSwiggan, Dr. Janice Rattray, and Dr. Homood Alharbi

You are invited to take part in a research study that will identify the personal and work-based factors that associated with intention to remain among Saudi Arabian nursing faculties. Before you decide to take part, it is important that you understand firstly why the research is being conducted and what participation will involve. Please take your time to read the following information, and carefully consider whether you want to take part. Please ask me, if there is anything that is not clear or if you would like more information.

What is the aim of the main study?

The aim of this study is to identify the personal and work-based factors associated with intention to remain (ITR) in higher education (HE) nursing facilities within Saudi Arabia by using eight questionnaires.

What is the aim of the quantitative phase?

This study will use a quantitative cross-sectional design to: a) test whether the variables that emerged from the systematic review are applicable and appropriate within a Saudi context; b) identify the relationships between independent IVs and dependent DVs variables, and c) to test the applicability of Job demand resource model in (JD-R) in this setting.

Why have I been invited?

You are being asked to participate as you are a faculty member who has been working in a nursing college, and thus, identified as eligible to participate in this study.

Do I have to take part and what about the terms for withdrawal?

It is entirely your decision whether to participate in the study or not. If you decide to take part, you are still free to withdraw at any time and without providing a reason. A decision to withdraw at any time, or a decision not to take part, will not influence your work as a faculty member in your institution.

What should I expect?

If you agree to take part in this study, it will involve you completing the following questionnaires:

a) The Experience and Evaluation of Work (van Veldhoven, 2015).
b) The Schutte Self-Report Emotional Intelligence (Schutte et al., 1998).
c) Generalized Self Efficacy scale (Schwarzer &Jerusalem ,1995).
d) The Maslach Burnout Inventory (Maslach et al., 1997).
e) Warwick-Edinburgh Mental Well-being Scale (Stewart-Brown et al., 2009).
f) The JDI Job Descriptive Index and JIG and Job in general (Balzer et al., 2009).
g) The Utrecht Work Engagement Scale (Schaufeliet al.,2006).
h) The Nurse Educators' Intent to Stay in Academe Scale (Derby-Dives ,2014).

You will also be asked certain socio-demographic characteristics' background questions in relation to your age, gender, nationality, marital status, work location, department, academic level, years of experience in HE.

We do not anticipate that there will be any disadvantages or risks if you choose to participate in the study. The information gathered may not benefit you directly, but I sincerely hope that it will help individuals in similar situations in the future.

What about time commitment?

The estimated time to complete these questionnaires will be approximately 30-60 minutes, although it may take less or more time, depending of the individual. The questionnaires will be distributed by the designated 'champion' from your college.

What is the method of returning the completed questionnaires? And how long will I have to complete these?

Once you have completed the questionnaires, you are asked to put them in a sealed box which will be located in the main staff room in a safe place. The questionnaires will be left with the participant for two weeks as a maximum time, in order to have sufficient time to fill and return them to the box.

What if there is a risk or any problem?

There is a potential risk that you become distressed when you are filling out the questionnaires. If you feel distress, I encourage you to seek help from your local occupational support policy. If you have a concern about the conduct of this research, you should contact the chair of the ethics committee in the School of Nursing and Health Sciences at the University of Dundee (Dr Andrew Symon a.g.symon@dundee.ac.uk) .

Who will disclose, use and/or receive my personal information (confidentiality /anonymity)?

All personal information which is collected about you during the course of the research will be kept strictly confidential. Only me and my supervisors will have access to this data. Any information about you that is obtained through the questionnaires will be anonymised for publication purposes (e.g. report, research paper, conference, presentation) so that you cannot

be recognised from it. Personal contact information (e.g. name, phone number, etc.) will be stored as a hard copy, separately from the study data, in a secure and locked location in KSU for at least five years after the study has ended.

If you decide to withdraw from the study, all identifiable data will be withdrawn; however, any unidentifiable data already collected prior to your withdrawal will be retained and used in the study.

University Research Ethics Committee of the University of Dundee as well as the Ethical Committee of King Saud University at the Higher Education Institute, Saudi Arabia, has examined the potential ethical issues. It is a requirement, for any researcher, that both sites have ethical approval before commencing the study.

Once the results are ready, the researcher intends to publish them in a journal, so that healthcare professionals or faculties can benefit from the results. At the end of the study, results will be disseminated to the key stakeholders.

The study has been organised and supervised by the School of Nursing and Health Sciences, University of Dundee, Scotland, UK.

How do I contact the researcher for further information?

Thank you for taking time to consider taking part in this study. If you would like to find out more about it, please contact:

Alya ALghamdi, Researcher, Department of Nursing and Health Sciences, University of Dundee – Scotland. I can be contacted in any of the following ways and will be happy to discuss the research with you: Email: aalghamdi@dundee.ac.uk OR aalgamdii@ksu.edu.sa

The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study. Subsequently, the Institutional Review Board (IRB) from King Saud University has reviewed and approved this research study.

Thank you for taking the time to consider taking part in this study.

Appendix 24: The Questionnaires Pack for Study

QUESTIONNAIRES

Title: Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

Date ……

Dear Participant,

My name is Alya Alghamdi and I would like to invite you to participate in my research study. I am a PhD student at the School of Nursing and Health Sciences at the University of Dundee as part of the External Joint Supervision Program at King Saud University. I am supervised by Dr. Janice Rattray, Dr. Linda McSwiggan, and Dr. Homod AlHarbi.

The purpose of this study is to explore work-related factors that might be associated with intention to remain among faculty members in Saudi Arabian Colleges of Nursing.

In this regard, I would like to ask you to consider completing a number of questionnaires as part of my research study and humbly ask a little of your time to do so. The questionnaires will only take about 30-60 minutes, although it may take less or more time, depending on the individual. Further, I am giving you the assurance that all information gathered will be dealt with utmost confidentiality and will be utilized only for the purpose of this research study.

I am hoping to merit your warm participation in my thesis study. Thank you much!

Researcher

Alya Alghamdi.

E-mile: aalghamdi@dundee.ac.uk,

aalgamdii@ksu.edu.sa

The Questionnaires

Part 1: Questionnaire on the Experience and Evaluation of Work (Van Veldhoven, 2015)

Instruction: This questionnaire asks you to assess different aspects of your work such as workload, workholism, work conflict, support, pay, autonomy, and commitment. Please read each item and mark the appropriate response:

The section asks about frequency of each statement

Statement	**Always**	**Often**	**sometimes**	**never**
1. Do you have freedom in carrying out your work activities?				
2. Can you decide how your work is executed on your own?				
3. Can you personally decide how much time you need for a specific activity?				
4. Can you organise your work yourself?				
5. Do you have too much work to do?				
6. Do you have to work extra hard in order to complete something?				
7. Do you have to hurry?				
8. Do you find that you are behind in your work activities?				
9. Do you have problems with the workplace?				
10. Do you have problems with the work pressure?				
11. Does your work demand a lot from you emotionally?				
12.Are you confronted with things that affect you personally in your work				
13. Do you have contact with difficult customers or patients in your work?				
14. In your work, do you have to be able to convince or persuade people?				
15. Does your work put you in emotionally upsetting situations?				
16. Do you have to work with a lot of precision?				
17 .Does your work require continual thought?				
18. Do you have to give continuous attention to your work?				
19. Does your work require a great deal of carefulness?				
20. In your work, are you seriously bothered by having to lift or move loads?				
21. Do you find your work physically strenuous?				
22. Does your work require physical strength?				
23. Do you have to do things in your work that you dislike?				

24. Do you receive contradictory instructions?				
25. Do you have to do your work in a way which differs from the method of your choice?				
26. Do you have to do work which you would rather not do?				
27. Do you have conflicts with your superior about the content of your tasks?				
28. Can you count on your superior when you come across difficulties in your work?				
29. If necessary, can you ask your superior for help				
30. Do you get on well with your superior?				
31. Do you have conflicts with your superior?				
32. Is there a good atmosphere between you and your superior?				
33. Have there been any unpleasant occurrences between you and your superior?				
34. Can you count on your colleagues when you encounter difficulties in your work?				
35. If necessary, can you ask your colleagues for help?				
36. Do you get on well with your colleagues?				
37. Do you have conflicts with your colleagues?				
38. Is there a good atmosphere between you and your colleagues?				
39.Have there been any unpleasant occurrences between you and your Colleagues?				

This section asks about how much you agree with each statement

Statement	**strongly agree**	**agree**	**neutral**	**disagree**	**strongly disagree**
40.This organization offers me sufficient educational possibilities for my current work					
41. I am satisfied with my possibilities for developing towards a higher function in the future.					
42. I receive sufficient support for my career development					
43. This organization pays good salaries.					
44. I can live comfortably on my pay.					
45. I am paid enough for the work I do.					
46. I find that my own views correspond closely to those of the organization.					
47. I really feel very closely involved with this organization.					
48. I feel very at home working for this organization.					

49. I have put so much of myself into this organization that I would find it extremely hard to leave.					
50. With respect to this organization, I really feel obliged to stay on several more years.					
51. Working for this organization is very appealing in comparison with most other jobs that I could get.					
52. Considering everything, as an employee I am satisfied working in this organization.					

Part 2: The Schutte Self Report Emotional Intelligence Test (Schutte, 1998).

Instructions: Indicate the extent to which each item applies to you using the following scale*:*

1 = strongly disagree
2 = disagree
3 = neither disagree nor agree
4 = agree
5 = strongly agree

Statement	Responses				
1. I know when to speak about my personal problems to others	1	2	3	4	5
2.When I am faced with obstacles, I remember times I faced similar obstacles and overcame them	1	2	3	4	5
3. I expect that I will do well on most things I try	1	2	3	4	5
4. Other people find it easy to confide in me	1	2	3	4	5
5. I find it hard to understand the non-verbal messages of other people*	1	2	3	4	5
6. Some of the major events of my life have led me to re-evaluate what is important and not important	1	2	3	4	5
7. When my mood changes, I see new possibilities	1	2	3	4	5
8. Emotions are one of the things that make my life worth living	1	2	3	4	5
9. I am aware of my emotions as I experience them	1	2	3	4	5
10. I expect good things to happen	1	2	3	4	5
11. I like to share my emotions with others	1	2	3	4	5
12. When I experience a positive emotion, I know how to make it last	1	2	3	4	5
13. I arrange events others enjoy	1	2	3	4	5
14. I seek out activities that make me happy	1	2	3	4	5
15. I am aware of the non-verbal messages I send to others	1	2	3	4	5
16. I present myself in a way that makes a good impression on others	1	2	3	4	5
17. When I am in a positive mood, solving problems is easy for me	1	2	3	4	5
18. By looking at their facial expressions, I recognize the emotions people are experiencing	1	2	3	4	5
19. I know why my emotions change	1	2	3	4	5
20. When I am in a positive mood, I am able to come up with new ideas	1	2	3	4	5
21. I have control over my emotions	1	2	3	4	5
22. I easily recognize my emotions as I experience them	1	2	3	4	5
23. I motivate myself by imagining a good outcome to tasks I take on	1	2	3	4	5
24. I compliment others when they have done something well	1	2	3	4	5

25. I am aware of the non-verbal messages other people send	1	2	3	4	5
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	1	2	3	4	5
27. When I feel a change in emotions, I tend to come up with new ideas	1	2	3	4	5
28. When I am faced with a challenge, I give up because I believe I will fail*	1	2	3	4	5
29. I know what other people are feeling just by looking at them	1	2	3	4	5
30. I help other people feel better when they are down	1	2	3	4	5
31. I use good moods to help myself keep trying in the face of obstacles	1	2	3	4	5
32. I can tell how people are feeling by listening to the tone of their voice	1	2	3	4	5
33. It is difficult for me to understand why people feel the way they do*	1	2	3	4	5

Part 3: Generalized Self Efficacy Scale (Schwarzer and Jerusalem, 1995).
Instruction: Please read each statement and choose your response to each statement if it is not at all true or exactly true or between them.

Statements	**Responses**			
	Not at all true	**Hardly true**	**Moderately true**	**Exactly true**
1. I can always manage to solve difficult problems if I try hard enough				
2. If someone opposes me, I can find the means and ways to get what I want.				
3. It is easy for me to stick to my aims and accomplish my goals				
4. I am confident that I could deal efficiently with unexpected events				
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.				
6. I can solve most problems if I invest the necessary effort.				
7. I can remain calm when facing difficulties because I can rely on my coping abilities.				
8. When I am confronted with a problem, I can usually find several solutions				
9. If I am in trouble, I can usually think of a solution				
10. I can usually handle whatever comes my way.				

Part 4: The Maslach Burnout Inventory (Maslach & Jackson, 1986)

Instructions: On the following page are 16 statements of university-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* academic work. If you have *never* had this feeling, circle the number "0" (zero) in the space before the statement. If you have had this feeling, indicate *how often* you feel it by circling the number (from 1 to 6) that best describes how frequently you feel that way.

How often:(0-6)	**Never**	**A few times a year or Less**	**Once a month or less**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**
1. I feel emotionally drained from my work.	0	1	2	3	4	5	6
2. I feel used up at the end of the workday.	0	1	2	3	4	5	6
3. I feel tired when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
4. Working all day is really a strain for me.	0	1	2	3	4	5	6
5. I can effectively solve the problems that arise in my work.	0	1	2	3	4	5	6
6. I feel burned out from my work.	0	1	2	3	4	5	6
7. I feel I am making an effective contribution to what this organization does.	0	1	2	3	4	5	6
8. I have become less interested in my work since I started this job.	0	1	2	3	4	5	6
9. I have become less enthusiastic about my work.	0	1	2	3	4	5	6
10. In my opinion, I am good at my job.	0	1	2	3	4	5	6
11. I feel exhilarated when I accomplish something at work.	0	1	2	3	4	5	6
12. I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
13. I just want to do my job and not be bothered.	0	1	2	3	4	5	6
14. I have become more cynical about whether my work contributes anything.	0	1	2	3	4	5	6
15.I doubt the significance of my work	0	1	2	3	4	5	6
16. At my work, I feel confident that I am effective at getting things done.	0	1	2	3	4	5	6

Part 5: Warwick-Edinburgh Mental Well-being Scale (Stewart-Brown et al., 2009)

Instruction: Below are some statements about feelings and thoughts.
Please tick (√) the box that best describes your experience of each over the **last 2 weeks**.

Statements	**Responses**				
	None of the time	Rarely	Some of the time	Often	All of the time
1.I've been feeling optimistic about the future	1	2	3	4	5
2.I've been feeling useful	1	2	3	4	5
3.I've been feeling relaxed	1	2	3	4	5
4.I've been feeling interested in other people	1	2	3	4	5
5.I've had energy to spare	1	2	3	4	5
6.I've been dealing with problems well	1	2	3	4	5
7.I've been thinking clearly	1	2	3	4	5
8.I've been feeling good about myself	1	2	3	4	5
9.I've been feeling close to other people	1	2	3	4	5
10.I've been feeling confident	1	2	3	4	5
11.I've been able to make up my own mind about things	1	2	3	4	5
12.I've been feeling loved	1	2	3	4	5
13.I've been interested in new things	1	2	3	4	5
14.I've been feeling cheerful	1	2	3	4	5

Part 6: Utrecht Work Engagement Scale (Schaufeli et al., 2006).

Instruction: The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you
ever feel this way about your job. If you have never had this feeling, cross the '0' (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. _____ At my work, I feel bursting with energy
2. _____ I find the work that I do full of meaning and purpose
3. _____ Time flies when I'm working
4. _____ At my job, I feel strong and vigorous
5. _____ I am enthusiastic about my job
6. _____ When I am working, I forget everything else around me
7. _____ My job inspires me
8. _____ When I get up in the morning, I feel like going to work
9. _____ I feel happy when I am working intensely
10. _____ I am proud on the work that I do
11. _____ I am immersed in my work
12. _____ I can continue working for very long periods at a time
13. _____ To me, my job is challenging
14. _____ I get carried away when I'm working
15. _____ At my job, I am very resilient, mentally
16. _____ It is difficult to detach myself from my job
17. _____ At my work I always persevere, even when things do not go well

Part 7: Nurse Educators' Intent to Stay in Academe Scale (Derby-Dives, 2014).
Instruction: Using the scale provided below, please indicate to what extent you disagree or agree with each of the following statements.
1 indicates that you Strongly Disagree
2 indicates that you Disagree
3 indicates that you Agree
4 indicates that you Strongly Agree

	Statements	**1 Strongly Disagree**	**2 Disagree**	**3 Agree**	**4 Strongly Agree**
1	I would lose more than I gain if I changed my profession as a nurse educator in academe				
2	I have invested too much of myself in nursing education to consider changing professions				
3	I plan to continue my career in nursing education.				
4	I have other options, but they are not as attractive as working as a nurse educator in academe				
5	Leaving my position as a nurse educator in academia would have many negative consequences				
6	The sense of success that I receive from working with students keeps me working as a nurse educator in academe				
7	I would miss the academic environment if I left nursing education				
8	The autonomy that I have as a nurse educator would be lost if I left academia				
9	I would miss the flexibility of my work schedule if I left nursing academe				
10	I would miss the opportunity to participate in research if I left nursing academe				
11	I would miss the interactions with my colleagues if I left nursing academe				
12	I plan to remain in academia beyond my retirement years				
13	If I had to redo my career choices I would choose nursing academe again				

Part 8: **Job Satisfaction Levels (The JDI Job Descriptive Index and JIG and Job in general)** (Balzer et al., 2009).

This questionnaire asks about how satisfied you are with your job. It has 6 sections.

People on Your Present Job	**Job in General**
Think of the majority of people with whom you work or meet in connection with your work. How well does each of the following words or phrases describe these people? In the blank beside each word or phrase below, write: **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____Stimulating _____Boring _____Slow _____Helpful _____Stupid _____Responsible _____Likeable _____Intelligent ____ Easy to make enemies _____Rude _____Smart _____ Lazy _____ Unpleasant _____Supportive _____ Active _____Narrow interests _____Frustrating _____ Stubborn	Think of your job in general. All in all, what is it like most of the time? In the blank beside each word or phrase below, write Think of your job in general. All in all, What is it like most of the time? In the blank beside each word or phrase below, write **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____Pleasant _____ Bad _____ Great _____ Waste of time _____ Good _____ Undesirable _____ Worthwhile _____ Worse than most _____ Acceptable _____ Superior _____ Better than most _____ Disagreeable _____ Makes me content _____ Inadequate _____ Excellent _____ Rotten _____ Enjoyable _____Poor

Work on Present Job	**Pay**
Think of the work you do at present. How well does each of the following words or phrases describe your work? In the blank beside each word or phrase below, write **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____Fascinating _____ Routine _____ Satisfying _____ Boring _____ Good _____Gives sense of accomplishment	Think of the pay you get now. How well does each of the following words or phrases describe your present pay? In the blank beside each word or phrase below, write **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____ Income adequate for normal expenses _____ Fair _____ Barely live on income _____ Bad _____ Comfortable

_____ Respected _____ Exciting _____ Rewarding _____ Useful _____ Challenging _____ Simple _____ Repetitive _____ Creative _____ Dull _____ Uninteresting _____ Can see results _____Uses my abilities	_____ Less than I deserve _____ Well paid _____ Enough to live on _____ Underpaid

Opportunities for Promotion	**Supervision**
Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these? In the blank beside each word or phrase below, write **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____ Good opportunities for promotion _____Opportunities somewhat limited _____Promotion on ability _____Dead-end job _____ Good chance for promotion _____ Very limited _____Infrequent promotions _____ Regular promotions _____Fairly good chance for promotion	Think of the kind of supervision that you get on your job. How well does each of the following words or phrases describe this? In the blank beside each word or phrase below, write **Y for 'yes' if it describes the people with whom you work.** **N for 'no' if it does not describe them** **? if you cannot decide** _____Supportive _____ Hard to please _____ Impolite _____Praises good work _____ Tactful _____ Influential _____ Up-to-date _____ Unkind _____Has favorites _____ Tells me where I stand _____ Annoying _____ Stubborn _____ Knows job well _____ Bad _____ Intelligent _____ Poor planner _____ Around when needed _____Lazy

Part 9: Demographic Characteristics

This section asks questions about you. Please answer the following questions or place a cross or tick where appropriate:

1. What is your age: ..... Years

2. What is your nationality? .....

3. What is your gender? .....Male
.....Female

4. What is your Marital Status? .....Married
.....Single
.....Divorced
.....Widowed

5. In which department do you work? .....Medical -surgical department
.....Maternity and child health department
.....Administration and Education department
.....Community and mental health department
Other.....

6. What is your academic rank? : ( ) Professor
( ) Associate professor
( ) Assistant professor
( ) Lecturer
( ) Demonstrator
Other.....

7. How long have you worked in the academia? .....Years and .... Months.

8. How long have you worked in the current academic institution? .....Years and .....Months

9. What qualifications do you have? ( ) PhD
( ) Masters
( ) Bachelor

10. How long did it take you to complete these questionnaires? .....

Thanks for your time and patient.

Appendix 25: Written Instructions for Participants who were Involved in the Online Focus Group Sessions

1- If you are unfamiliar with the program (Microsoft Team), the researcher will offer test calls for those who are inexperienced or lack confidence using this selected technology. Please contact the researcher by email or phone to test the program or to answer any question about this online program prior to the actual focus group.

2- If you have any technical problem during the online focus group you can contact the researcher for assistance on phone number: ……. …..or via email:……

3- You have the choice to turn on or off the video call during the online focus group session.

4- To avoid distractions during the focus group session, please avoid the use of mobile phones and avoid speaking with others around you.

5- Please use the mute function on your microphone if you are not speaking to prevent interference from any background noise.

6- You can use the raised hand feature or write your queries or questions on the chat function and the researcher assistant will be responsible for arranging who will speak next, to give a chance to all participants to share in the discussion.

7- Prior to the start of the session the researcher will remind you that the focus group session will be recorded

8- Please note that you need to respect each other's views, give each other time to share their views, and respect others' rights to confidentiality.

9- The researcher will remind you before the data generation begins, that even if you agreed and signed the consent form, you are still free to withdraw/logout without providing a reason.

10- Participants are not allowed to record the focus group for any purpose.

Appendix 26: Participant Information Sheet for Focus Group Study

PARTICIPANT INFORMATION SHEET (Focus group)

Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement And Intention to Remain

Invitation to take part in a research study

My name is Alya Alghamdi and I would like to invite you to participate in my research study. I am a PhD student at the School of Nursing and Health Sciences, University of Dundee, supervised by Dr. Linda McSwiggan, Dr. Janice Rattray, and Dr. Homood Alharbi

You are invited to participate in the fourth phase of the study; the qualitative phase (focus groups). The purpose of the study is to identify the personal and work-based factors associated with intention to remain among faculty members in Saudi Arabian Colleges of Nursing. Before you decide to take part, it is important that you understand why the research is being conducted and what participation will involve. Please take your time to read the following information, and carefully consider whether you want to take part. Please ask me, if there is anything that is not clear or if you would like more information.

What is the aim of the main study?

The aim of this study is to identify the personal and work-based factors associated with intention to remain (ITR) in higher education (HE) nursing facilities within Saudi Arabia.

What is the aim of the qualitative phase (focus group)?

The aim of this focus group is to share the results of the cross-sectional survey and explore the participants' responses to these results, to gain greater understandings of the problem of intention to remain (ITR). Whilst the participants may raise other points about ITR, and if so these can be discussed. In addition, it may help us to identify potential interventions to improve the working environment.

Why have I been invited to take part in this study?

You are being asked to participate as you are a faculty member who has been working in a nursing college and who, therefore, has experience that will be valuable in helping us to fully explain the survey results, and the potential implications, within a Saudi context.

Do I have to take part and what about the terms for withdrawal?

It is entirely your decision whether to participate in the study or not. You may keep this information sheet to remind you about the study details. If you decide to take part in the study, you are still free to withdraw at any time and without providing a reason. A decision to withdraw at any time, or a decision not to take part, will not influence your work as a faculty member in your institution.

What should I expect?

If you agree to take part, you will be asked to sign a written consent form indicating your agreement to participate in one focus group. This focus group will involve up to eight participants. I will share results from our recent survey about ITR and ask the group to discuss their views in relation to these results. I will facilitate the discussion and a research assistant will help me with organisation of the focus group and take some notes. These notes will be used to identify accurate content for data analysis. With your permission, the discussions will be audio-recorded.

Where and when will the focus group take place?

The focus group will take approximately from 45 to 90 minutes and will be held in the participants' college, during their working hours, in a closed meeting room. If you agree to take part, I will contact you to arrange a convenient time. The agreed time and place will be dependent upon the majority of participants' availability.

What if there is a risk or any problem?

This study is designed to avoid harm or exploitation of any participant; it is not, therefore, anticipated that participating in this study will pose any risk to participants. If the discussions cause you any distress, you are encouraged to seek help via your local occupational support policy.

If you have any concerns about the conduct of this study, you should contact the chair of the ethics committee in the School of Nursing and Health Sciences at the University of Dundee (Dr Andrew Symon a.g.symon@dundee.ac.uk).

Who will disclose, use and/or receive my personal information (confidentiality/anonymity)?

All personal information collected about you during the course of the research will be kept strictly confidential and only the supervisory team and I will have access to this. Any information about you (name, phone number, and locations) that is obtained from you during the focus group will be anonymised for publication purposes (e.g. report, research paper, conference, presentation) so that you cannot be recognised from it. All study data will be kept separately from the consent forms, and personal contact information, so that no connection can be made between the data and your personal identity. Personal contact information (e.g. name,

phone number, etc.) will be stored as a hard copy, separately from the study data, in a secure location for at least five years after the study has ended.

If you decide to withdraw from the study, all identifiable data will be withdrawn; however, any unidentifiable data already collected prior to your withdrawal will be retained and used in the study.

The University Research Ethics Committee of the University of Dundee as well as the Ethical Committee of King Saud University at the Higher Education Institute, Saudi Arabia, have examined the potential ethical issues. It is a requirement, for any researcher, that both sites have ethical approval before commencing the study. Once the results are ready, I intend to publish them in a journal, so that healthcare professionals or faculties can benefit from the results.

The study has been organised and supervised by the School of Nursing and Health Sciences, University of Dundee, Scotland, UK.

What to do you are interested in participating in a focus group

If you are interested in becoming a participant in a focus group discussion, please complete the attached slip with your contact details (phone number and email address). Place the signed slip in the closed envelope and then please place it to the sealed box that is located in the main staff room. Thereafter, I will contact you by phone or email to arrange the time and place for the focus group.

How do I contact the researcher for further information?

Thank you for taking time to consider taking part in this study. If you would like to find out more about it, please contact:

Alya ALghamdi, Researcher, Department of Nursing and Health Sciences, University of Dundee – Scotland. I can be contacted in any of the following ways and will be happy to discuss the research with you: Email: aalghamdi@dundee.ac.uk OR aalgamdii@ksu.eu.sa

The University Research Ethics Committee of the University of Dundee has reviewed and approved this research study. Subsequently, the Institutional Review Board (IRB) from King Saud University has reviewed and approved this research study .

Thank you for taking the time to consider taking part in this study.

Appendix 27: Permission to Contact Slip (focus group)

Permission to contact slip.

Title: Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

Please tick the appropriate boxes	**Yes**
I have read and understood the Participant Information Sheet	☐
I have been given the opportunity to ask questions about the project.	☐
I agree to take part in the study.	☐
I understand that my taking part is voluntary; I can withdraw from the study at any time, and I do not have to give any reasons for why I no longer want to take part.	☐
I understand that any personal information (name, phone number, and locations) obtained from me, will be anonymised so that I cannot be recognised from it.	☐
I give permission that personal information (e.g.name, telephone number) will be used by the researcher only to contact me during this study.	☐
I agree that personal contact information (e.g. name, phone number) will be stored as hard copy separately in a secure location for at least 5 years in a locked cabinet in a locked office room at King Saud University, Riyadh, KSA after the study has ended.	☐
I understand that any information I provide will be treated in strict confidence. The information will be held securely for at least 5 years and will only be available to the research team. The information will be destroyed thereafter.	☐
I give permission that the focus group part can be audio recorded	☐

Name of participant [printed]	
Signature	
Academic rank	
Phone number	
Email	
Date	

Project contact details for further information: Alya Alghamdi,+966565555093. Email: aalgamdii@ksu.edu.sa.

Appendix 28: Consent Form for Focus Group

Consent Form for focus groups

Title : Individual and Work Environment Factors That Influence Nursing Faculties' Well-being, Engagement and Intention to Remain

Please tick the appropriate boxes	**Yes**
Taking Part	
I have read and understood the Participant information sheet	☐
I have been given the opportunity to ask questions about the project.	☐
I agree to take part in the study.	☐
I understand that my taking part is voluntary; I can withdraw from the study at any time, and I do not have to give any reasons for why I no longer want to take part.	☐
I understand that my words may be quoted in publications, reports, web pages, and other research outputs.	☐
I understand that any personal information about you (name, phone number, and locations) that is obtained from you either during the interview or through the questionnaires will be anonymised. so that you cannot be recognised from it.	☐
Use of the information I provide beyond this project	
I agree for the data I provide will be treated in strict confidence and held securely for at least 5 years in a locked cabinet in a locked office room at King Saud university, Riyadh,	☐

KSA and will only be available to the research team. The information will be destroyed thereafter.[1]

I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form. ☐

I give permission that personal information (e.g. telephone number) will be used by the researcher only to contact me. Then will be stored as hard copy separately in a secure location for at least 5 years after the study has ended. ☐

I understand that other genuine researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form. ☐

I give permission that the interview part will be audio recorded. ☐

_____	_____	_____	_____	_____	____
Name of participant [printed]	Signature	Academic rank	Phone number	Email	Date

Project contact details for further information: Alya Alghamdi ,+966565555093, Email: aalgamdii@ksu.edu.sa.

Appendix 29: Example of Initial Coding and Identifying Themes

Q: Why do you think the Saudi nationals reported poorer mental health about their work than non-Saudi faculty members?

Participants Focus Group Extract (quotations)	Codes	Themes
Focus group 1		
Asma: Okay, for me, I believe, because still in the Saudi community, psychology or feelings or expressing yourself is still not socially acceptable. So, I believe that we don't express ourselves, so maybe that's why our mental health is not as good as the non-Saudi. The non-Saudi, I mean, they might like to have the support, the… What I am saying is, Indians or Philippines, or whatever nationality they are, non-Saudis, they have their own, you know, they support each other because they know they are from the same country they will have more support. But for us Saudis, we don't like, work is work, like deal with it, you don't have to express yourself or whatever. But I believe that now things are changing and the new generation, they're more expressive and, you know, more talkative than the older generations. I'd say I think, I believe, that's why. **Ariana**: Oh, because this surprises me, that most of them feel that they are mentally exhausted. I don't know, maybe, as Asma said, they did not have the support system; their family are not supporting them. The non-Saudis know they come here to a foreign country for a specific time written in a contract. After this time, maybe the rewards are more than a Saudi female or male gets, maybe the benefits they get we are not getting like the same, what is it, it's not my personal opinion, but what is coming to mind, because the non-Saudis have their own housing, allowance, they teach their kids, their transportation allowance, and everything. Maybe they feel they are satisfied, and they have the same workload as the Saudis. The Saudis have a lot of stress, or maybe we took this, how can I explain it, we took the jobs without modifying them in a way that matches our culture. Yeah, sometimes we need to fix something to match and so we can do better and feel better, it depends. Actually, there are a lot of factors we can say here. **Aisha**: I guess we have a kind of habit of comparing ourselves with others. I don't know whether non-Saudis do or not, but I guess we do, we always compare what we are doing with other colleagues, or with others, even if not in the same college, even in colleges outside, like in Riyadh, or in Makkah, or in whatever, we compare	Social stigma Support system Nationality support Self- excerption Reaction to result (surprising) Support system, family support Limited contract, privileges Privileges Stressors Culture applicability, job appropriateness Career development Competition stressful Challenges	1-Cultural reason social- Stigma Nationality support Self-excerption Family responsibility Social demands Culture diversity family support job appropriateness Culture-chock International exposure 2-Psychological aspect Stress Mental exhaustion Resiliency Gratitude advantage 3-Work related environment Privileges Support system Career development Competition stressful Challenges Promotion Development contract Task orientation Financial source Motivation improvement interest Job security Work Adaption

ourselves with them, and we have this kind of competition. I feel like I am in a competition, I have to do more work, I have to improve myself. I have to have more workshops like this to get to be more valued than others. I guess Saudis have competition because they have positions - non-Saudis can stay in the same position for a long period of time or years, but the Saudi faculty members soon, after years, they will get a position, so, between Saudi members they have a kind of competition, so they get exhausted, mentally. **Ahlam:** Because, as Aisha said, in the working competitive environment, every Saudi faculty member wants to exceed the other member, wants to have a higher position than some of their colleagues. They want to show that they're better than other Saudi colleagues rather than non-Saudis, because non-Saudis will know they have a contract for two years and after these two years they will leave. And it's okay for them to stay in the same position, and non-Saudis are open-minded and going to, you know, a psychiatric clinic if they have any problem with their mental health, rather than here in Saudi, where I think we still have this stigma. If you went to a psychiatric doctor, psychiatric clinic or whatever, they will be afraid that it will show there is, you know, something less than other, I don't know how to say this, lower than us? They have the stigma that they went to a clinical psychiatric or whatever, visiting a shrink or something, it would be a stigma for them for their entire life. I don't know how to explain my point but I think that is all I have to say.	Career development, Achievement, Promotion Promotion Mental exhaustion Competition stressful Promotion Development Limited contract Social stigma Social stigma	
Focus group 2		
Batol: In my opinion, with the Saudi employment I think, they are citizens who have full participation in the community, they have to do their job in their family and in their community, further than the non-Saudi. The non-Saudis, I think they are not so busy with their community, no, they leave their country, they leave their families, and come to here, to work, and concentrate … putting in more concentration, I think. I think this is the point. Yeah, thank you. 34:14 **Bahia**: In my opinion, I think the Saudi has a high expectation than what he found in his work. You know, as you are in academia, the community looks to you as something… that actually it's not, it's not. I think from many aspects, like social, cultural, economics. Also, the non-Saudi, he gets a chance, a good or excellent chance, to work in Saudi rather than his own country, that why he leaves his country. That's all.	Social demands Family responsibly Task oriented Challenges Culture, financial source privileges	
Focus group 3		

Dr. Ceren: I'm not sure about, I'm also really surprised with this, because, I don't know why, but, maybe... it's depending on environmental issues, maybe society issues, I mean support, and more resilience from the community surrounding. The environment that is surrounding you makes your mental health better; maybe, I don't know really how to express that. Maybe it's relying on the environment of society for support, maybe. For non-Saudi nationals, because, they come here, it's like no clear families here, and they are supported and pick their bones towards each other to support themselves, to do this job, they come to the country to just… they have a direct task to do this job in a very perfect way. So, they are supported in their surroundings. Maybe for Saudi nationals they are surrounded by many obligations and demands from the environment, and from society. So, they are reporting poorer mental health. It's my view. But I'm really a little bit surprised [laughs] by this. But this is my view about it. **Dr. Ceren:** Yeah, that's why I said maybe this is your environment or like, some society issues related to that. Or more obligations towards community and society, makes them more exhausted, more than non-Saudi nationals. **Dr. Cedra**: I think it's the role of the environment, because for us as Saudis [thank God] we live in a very rich country, in a healthy environment, and compared, maybe, to other nationalities who live in a different environment, different culture, they may…. they may have this differentiation in the results. So, from my view of point, it may be related to the environment. **Dr. Ceren:** Yeah. Alya. Yeah, I think for someone who is coming away from his environment, from his country, from his home place, of course he will - I believe he will feel more stressed. I remember when I studied for my PhD and I struggled for many years in a foreign place and I was stressed in the Australian community and say how come…how lucky they are to just do their studies, or study their PhD, beside their families and beside their supporting database. So, I believe that just leaving your home place, you will feel like the huge stress, and your mental well-being will not be okay. Like the other nationals who are just settling inside their home and they are doing their job there. So, yeah, that's why it surprises me a little bit.	Reaction to result (surprising) Supportive system Resiliency Supportive system Family responsibility Task oriented Social demands social demands Financial source Culture diversity Culture-chock Culture-chock Supportive system Family support Reaction to result (surprising)	
Focus group 4		
Dr. Dani: Are we safe to really use the work border mental wellbeing among Saudi nationals compared to non-Saudis? **Dr. Dani:** I'm also very surprised about this result.	Reaction to result (surprising)	

Dr. Dani: I have a theory, but this is something that probably I'm still working on. This is my 17th year in Saudi Arabia, I've been working with, most of my exposure is with students, Saudi students would be in the master's level, I always ask them about the issue that maybe international exposure would do good among Saudi nationals, because, you know, I keep on telling my Saudi students at master's level: international exposure would do good to the Saudis in general, because you know the word "poor" in Saudi Arabia is not actually poor outside Saudi Arabia. The type of when studies… poor in Saudi Arabia is not considered poor outside of Saudi Arabia. So, for example, of equal would be considered poor here, but their choices will be, you know, which not good [inaudible]. But if you look at outside Saudi Arabia, poor really means no food! And I keep telling them, maybe international exposure to Saudi nationals would be good for them, to be able to appreciate what we're having and what we're enjoying here inside the Kingdom. And that's the only theory I can give you as how most Saudi nationals have to appreciate what they have here, because they don't have a real comparison to... [Inaudible]...the greater picture of what being poor or really being destitute in terms of health and of owning things - just a simple theory for me. Thank you.	International exposure Gratitude advantage Less interesting No improvement	
Dr. Dawood: Yes, my response to this question is, first, sometimes I do agree that Saudi nationals reported poor mental health with their work because, let's say in the governmental section, job security is one of the most important factors that lead to this result, that means that they have, like, poor outcome, like, I mean annually they will not be kicked out from their position or changed. They will still remain because they have this security, but on the other hand, in the private sector, it's different because we know that in the private sector they have an annual assessment, they go with, sorry, the ranking system. And I think this is the thing that lead to the fact that Saudis have that poor mental health because they don't actually have to work harder in the governmental sector, they don't have to develop their skills, they have good payment, so one's maybe thinking, "Why do I have to work harder if I'm satisfied with what I have now?"- Okay?	No interesting Job security Financial source Reaction to result (doubts) Economic reason Motivation Privileges	
Dr. David: Alright, okay, thank you, I have my doubts with this, with regards to the response from the Saudi nationals who responded regarding poorer mental wellbeing, I don't exactly. But with regards to non-Saudis, they're motivated - perhaps they have a good salary, maybe, and they are getting a higher income than what they would receive in their home country, so this is something to do with motivation, or rewards, or the salary they get from working here. That's why they're	Work Adaption, privileges	

clearly motivated and they have a good mental attitude compared to the Saudi national. But I have my doubts regarding the response coming from the Saudi nationals. My observation with regards to these answer or responses comes from "Why do you have poor mental wellbeing?" And this is my think on this item, number five, thank you. **Dr. Dhari**: It's me, I think. Well, I think, the best who can answer this question is the Saudis themselves. I'm not a Saudi, but as a researcher I could argue that the Saudi workers are used to the easy job. For example, I could argue this and say that Saudis are used to the easy jobs, and therefore they are finding it difficult to adapt to more difficult jobs, find it difficult to adapt to jobs that are associated with more pressures. For example, I could argue that, but it's not for the researcher or for Alya to ask the Saudi faculties, "Why do they think that Saudis find it difficult to adapt, or reported a poorer mental health status, than others". Because, quite honestly, this is a striking result, taking into account that all the resources are available for the Saudis, all the resources are available compared to other faculties in other countries, for example. So, yeah, I think the Saudis are better to answer this question. But still I believe as a researcher - if I'm the researcher I could argue that the Saudi faculties are used to the easy jobs, which is not totally true, by the way, but as an argument it could be true. Thank you.	Coping	