An exploratory study of the role of emotion regulation and emotional intelligence in compassion satisfaction and fatigue among doctors and nurses

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I declare that this thesis is my own work, and it has not been submitted for an award of a higher degree elsewhere. The word count is 32,347. This does not exceed the permitted maximum on the blended learning programme

LIST OF CONTENTS II

APPENDIX VII

LIST OF TABLES VIII

LIST OF FIGURES IX

ACKNOWLEDGMENTS X

ABSTRACT 1

CHAPTER ONE: THE INTRODUCTION 2

1.0 Introduction 2

1.1 The case for this study 4

1.2 Thesis overview 6

1.3 Chapter Summary 7

CHAPTER TWO: SYSTEMATIC LITERATURE REVIEW 8

2.0 Introduction 8

2.1 Literature review 8

2.3 Literature review question 10

2.3 Method 10

- 2.3.1 Literature search 10
- 2.3.2 Study eligibility 12
- 2.3.3 Inclusion criteria 12
- 2.3.4 Exclusion criteria 12
- 2.3.5 Screening 13
- 2.3.6 Data extraction 13
- 2.3.7 Quality assessment 14
- 2.3.8 Data reporting 14

2.4 Results 15

- 2.4.1 Study designs 15

- 2.4.2 Study aims 15
- 2.4.3 Study settings 15
- 2.4.4 Populations studied 15
- 2.4.5 Types of emotion regulation strategies commonly used in clinical settings 16
- 2.4.6 Types of constructs measured in studied reviewed 16
- 2.4.7 Professional implications of emotion regulation strategies in doctors 17
- 2.4.8 Professional implications of emotion regulation strategies in nurses 17
- 2.4.9 Professional implications of emotion regulation strategies in studies that did not clearly distinguish outcomes between doctors and nurses 18
- 2.4.10 Patient implications of emotion regulation in doctors and nurses 18
- 2.4.11 Methodological quality assessment 27
- 2.4.12 Emotion regulation outcome measures (tools) used in studies 30

2.5 Discussion 31

2.6 Limitations 33

2.7 Future research directions 34

2.8 Chapter summary 34

CHAPTER THREE: THEORIES OF EMOTIONS, EMOTION REGULATION AND EMOTIONAL INTELLIGENCE 35

3.1 Introduction 35

3.2 What are emotions 35

3.3 Overview of the major theories of emotions 37

3.4 Neurobiological basis of emotions 40

3.5 Measuring emotions 43

3.6 Emotions in organisations 45

3.7 Emotion regulation 48

3.7.1 Gross's Process Model of Emotion Regulation 15

- 3.8 Emotional intelligence 60

3.8.1 Chapter summary 66

CHAPTER FOUR: THEORIES OF COMPASSION SATISFACTION, COMPASSION FATIGUE AND STRESS 67

4.1 Introduction 67

4.2 The constructs of compassion satisfaction and compassion fatigue 67

4.3 Compassion satisfaction 67

4.4 Compassion fatigue 69

4.5 Conceptual frameworks for creating compassion satisfaction and fatigue 71

4.6 Overview of Stress theories 74

- 4.6.1 Systems-based approaches - Stress as a response 74
- 4.6.2 Systems-based approach - stress as a stimulus 75
- 4.6.3 Transaction-based approaches (Stress as a transaction) 76
- 4.6.4 Resource-based approaches - Conservation of Resources Theory 78
- 4.6.5 Chapter summary 79

CHAPTER FIVE: METHODOLOGY AND METHODS 80

5.1 Introduction 80

5.2 Methodology and theoretical perspectives 80

- 5.2.1 Research question 80
- 5.2.2 Epistemological and philosophical positions 80
- 5.2.3 Establishing a model for managing negative emotional experiences in the workplace 81

5.3 Methods 85

- 5.3.1 Study design *85*
- 5.3.2 Inclusion criteria 85
- 5.3.3 Study Setting 85
- 5.3.4 Participant selection and sample size 85
- 5.3.5 Power analysis 86
- 5.3.6 Ethical issues 86
- 5.3.7 Data collection 88

5.3.8 The data collection questionnaire 89

- 5.3.8.1 Susceptibility to Emotional Contagion Scale 89
- 5.3.8.2 The Compassion Satisfaction & Fatigue Subscale of The Professional Quality of Life Scale [ProQoL] 89
- 5.3.8.3 Emotion Regulation Questionnaire 90
- 5.3.8.4 The Short Profile of Emotional Competence Questionnaire 91
- 5.3.8.5 Cognitive Fusion Questionnaire 92
- 5.3.8.6 Two brief open-ended questions 93

5.4 Data Analysis 93

- 5.4.1 Mediation analysis 94
- 5.4.2 Rationale for including mediators in this study 97
- 5.4.3 Strategy for analysing two open-ended questions 98
- 5.5.5 Chapter summary 98

CHAPTER SIX: RESULTS 100

6.1 Introduction 100

6.2 Participant characteristics 100

6.3 Preliminary data analysis 103

- 6.3.1 Relationships between demographic variables, compassion satisfaction and compassion fatigue 103
- 6.3.2 Relationships between explanatory variables in participants 103
- 6.3.3 Correlational Analysis - Relationships between explanatory, mediator, and dependent variables in participants 104

6.4 Main study findings 106

- 6.4.1 Regression analysis 106
- 6.4.2 Mediation analysis 107
- 6.4.2.1 Cognitive reappraisal as an explanatory variable of compassion satisfaction mediated by intrapersonal emotional intelligence 107
- 6.4.2.2 Cognitive reappraisal as an explanatory variable of compassion fatigue mediated by intrapersonal emotional intelligence 108

6.4.3 Analysis of two open-ended questions 109

- 6.4.3.1 Question 1 “What is the most enjoyable aspect of your role” 109

- 6.4.3.2 Question 2: “What is the least enjoyable aspect of your role”..... 112

6.5 Chapter summary 116

CHAPTER SEVEN: DISCUSSION, POLICY IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS 117

7.1 Introduction 117

7.2 Thesis evolution 117

7.3 Discussion of the main study findings 120

- 7.3.1 Demographic factors and prevalence of compassion satisfaction and compassion fatigue 120

7.4 Regression analysis 121

- 7.4.1 Relationships between cognitive reappraisal, emotional intelligence and compassion satisfaction and fatigue 121

7.5 Mediation analysis 122

- 7.5.1 Cognitive reappraisal as an explanatory variable of compassion satisfaction and fatigue with intrapersonal emotional intelligence as a mediator 122

7.6 Policy implications 125

7.7 Limitations of the study 126

7.8 Future research directions 128

References 130

Appendix 147

- 1.0 Study questionnaire 147
- 2.0 Participant information sheet 152
- 3.0 Participant Consent Form 155
- 4.0 Letter of invitation to participate in this study 156
- 5.0 Cover letter sent with email invitation (consented participants) 157
- 6.0 Capacity and Confirmation letter 158
- 7.0 HRA Approval Letter 159
- 8.0 Ethics Approval Letter 160
- 9.0 Sponsorship letters 161
- 10.0 Independent samples t-tests of doctors' and nurses' scores of predictor variables on dependent variables 163
- 11.0 One-way analysis of variance (ANOVA) test of predictor variables on speciality areas 164
- 12.0 Open ended question: Q1 "What the most enjoyable aspect of your role"; Theme codes and Response labels 166
- 13.0 Open ended question: Q2 What the least enjoyable aspect of your role"; Theme codes and Response labels 186
- 14.0 Backward elimination regression model 1: Explanatory Variables on Compassion Satisfaction 205
- 15.0 Literature review search output update 206
- 16.0 Permission from author to use Gross's Process model of Emotion Regulation 249

List of tables

- Table 1. Contents of Data Extraction Sheet 13
- Table 2. Characteristics of Studies 20
- Table 3. Methodological Quality Rating Scores 28
- Table 4. Summary of Emotion Regulation Outcome Measures (Tools) 30
- Table 5. Characteristics of Participants 101
- Table 6. Compassion Satisfaction and Fatigue Levels 102
- Table 7. Pearson's Correlations between the Six Explanatory Variables, Compassion Satisfaction and Compassion Fatigue 105
- Table 8. Parsimonious regression model 1: Explanatory Variables on Compassion Satisfaction 106
- Table 9. Parsimonious regression model 2: Explanatory Variables on Compassion Fatigue 106
- Table 10. The Best Aspects of Doctors and Nurses Roles 111
- Table 11. The Least Enjoyable Aspects of Doctors and Nurses Roles 114

List of figures

- Figure 1. Flow chart of selection process 11
- Figure 2. The process model of emotion regulation 57
- Figure 3. A proposed model for managing negative emotional experiences in the workplace and its potential influence on compassion satisfaction and compassion fatigue 84
- Figure 4. Regression power analysis calculation 86
- Figure 5. A conceptual diagram of a mediation relationship between explanatory and dependent variables 96
- Figure 6. Relationship between cognitive reappraisal and compassion satisfaction mediated by intrapersonal emotional intelligence 107
- Figure 7. Relationship between cognitive reappraisal and compassion fatigue mediated by intrapersonal emotional intelligence 108
- Figure 8. The best aspects of doctors and nurses role 111
- Figure 9. The least enjoyable aspects of doctors and nurses role 115
- Figure 10. The process model of emotion regulation 119

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Abstract

Aim: To explore relationships between emotion management strategies (ER), emotional intelligence (EI), and compassion satisfaction (CS) and fatigue (CF) in doctors and nurses at a large National Health Service (NHS) Hospital in the United Kingdom (UK).

***Objective*:** To identify predicting variable(s) for compassion satisfaction and fatigue in doctors and nurses.

Method: Four hundred and eighty-seven participants completed questionnaires assessing six possible explanatory variables for compassion satisfaction and fatigue: (i) intrapersonal EI (ii) interpersonal EI, (iii) cognitive reappraisal, (iv) cognitive fusion, (v) expressive suppression, and (vi) emotional contagion. Two open-ended questionnaire items assessed the best and worst aspects of doctors and nurses' roles that might be associated with emotional stress and potentially influence CS and CF.

Data Analysis: Descriptive statistics, correlations, regression, and mediation analysis were undertaken. The two open-ended items were analysed using content analysis.

Results: Only cognitive reappraisal and intra-personal EI predicted CS positively and CF negatively. Intra-personal EI was the stronger predictor. It predicted CS ($\beta = .29$, $p < .001$) and CF ($\beta = -.35$, $p < .001$) versus cognitive reappraisal CS ($\beta = .27$, $p < .001$) and CF ($\beta = -.15$, $p < .001$). Intrapersonal EI also partially mediated relationships between cognitive reappraisal and CS ($b = .59$, BCI .298, .927) and between cognitive reappraisal and CF ($b = -.72$, BCI -1.099, -.378). Content analysis of the two open-ended questionnaire items demonstrated that 54% of the enjoyable aspects of participants' roles related to direct patient care/contact, while 60% of the least enjoyable aspects related to workplace stress, bureaucracy, lack of support and resources, and workplace politics. This provides contextual support for the main quantitative findings above, and reiterates the importance of supporting development of intrapersonal emotional intelligence skills which does help enhance reappraisal strategies required to manage undesirable effects of workplace stressors like negative emotions e.g. anger or anxiety, that can influence CS and CF.

Conclusion: Intrapersonal EI represents an important target variable for possible psychological interventions aimed at enhancing CS and reducing CF in doctors and nurses in clinical settings.

Chapter One: The Introduction

1.0 Introduction

Emotions play an important role in human life and it is generally recognised that an individual's ability to regulate their emotions is closely associated with their general physical and mental health wellbeing (Trindade, Ferreira, & Pinto-Gouveia, 2018). Emotions are also known to influence human communication intentions, human behaviour modelling, attachment orientations and information processing (Croskerry, Abbass, & Wu, 2010; Hareli & Hess, 2012). Doctors and nurses, like other healthcare professionals frequently work in emotionally charged settings and they are routinely required to deliver high quality care in a compassionate manner whilst simultaneously maintaining their emotional wellbeing. Within clinical environments emotions are known to play an important part of successful patient discourse with colleagues and in clinician decision-making (Austenfeld, Paolo, & Stanton, 2006; McNaughton, 2013). In respect of decision making for example, a study found that physicians perceived their emotional states as influencing medical activities such as prescribing, talking to patients and making onward referrals (Kushnir, Kushnir, Sarel, & Cohen, 2011). Additionally, it has been suggested that the lack of recognition of emotions by clinicians themselves may be associated with medical errors (Borrell-Carrió & Epstein, 2004; Ely, Levinson, Elder, Mainous, & Vinson, 1995). Clinician's own reflective accounts of the role of negative emotions in their professional lives suggests that it can impact on their practice. For example they may seek significantly more information when exercising clinical judgements, compared with when they experience a positive emotional state (Heyhoe et al., 2016). The proposed lack of emotion recognition by clinicians themselves has been previously shown to be associated with distress, poor judgement, burnout, and reduced work satisfaction (Blanchard et al., 2010; Cooper , Rout , & Faragher, 1989; Ekman & Halpern, 2015; Ramirez et al., 1995).

Doctors and nurses have a professional responsibility to facilitate both physical and emotional needs of their patients and the pursuit of this responsibility can result either in positive or negative outcomes in respect of their professional quality of lives. It has been argued that the presence of positive professional

benefits of providing care to others e.g. job satisfaction can affect doctors and nurses ability to deliver safe and high quality of care (Halbesleben, Wakefield, Wakefield, & Cooper, 2008). The positive aspects or benefits of providing professional care to others has been described as compassion satisfaction and the negative aspects as compassion fatigue (Stamm, 2010). An example of what compassion satisfaction might encompass is a doctor or nurse deriving positive reward from managing a patient's physical illness or emotional difficulties through their expert skills (Simon, Pryce, Roff, & Klemmack, 2006). The doctor or nurse may also derive compassion satisfaction through positive affect from supportive colleagues or their contribution to wider society through their work. Compassion satisfaction is therefore a construct that measures those positive experiences in the course of delivering care to patients. In contrast the construct of compassion fatigue describes the more negative aspects of delivering care in a professional capacity. It is frequently described as the cost of caring and it can exert an insidious effect on the fundamental values of care provision such as empathy and compassion (Mathieu, 2007). Coetzee & Klopper (2010) reiterated this in their description of compassion fatigue as the loss of a nurturing ability that is vital to providing compassionate care. Compassion fatigue is also associated with a deep sense of physical and emotional exhaustion, increased cynicism in the caregiver, loss of enjoyment in the caregiver role, anxiety, and depression (Figley, 2015). Other symptoms of compassion fatigue include anger and the suppression of emotions (Bride, Radey, & Figley, 2007). With regards to how it presents, compassion fatigue typically occurs progressively, and it is thought to be the effect of cumulative exposure and intense contact with patients or individuals experiencing distress or pain. Compassion fatigue if unaddressed is also considered by some investigators as a pathway to possible burnout (Thompson, Amatea & Thompson, 2014). In her professional quality of life model, Stamm (2010) subcategorised compassion fatigue into two distinct components namely secondary traumatic stress and burnout. Secondary traumatic stress occurs when a caregiver such as a doctor or nurse is exposed indirectly to trauma or trauma-related events by another person who has experienced it. Symptoms of secondary traumatization are similar to Post-Traumatic Stress Disorder and may include re-experiencing flashbacks of the event, nightmares and hyperarousal behaviours such as becoming easily startled

(Abendroth & Flannery, 2006; Figley, 2015; Huggard, 2003; Meadors & Lamson, 2008). These symptoms while important are not as common in doctors and nurses delivering routine frontline patient care compared with clinical therapists and counsellors whose main role is to engage at depth with patients who have experienced trauma or trauma-related incidents (Ekundayo, Sue, & Jo, 2013). By distinguishing secondary traumatic stress from burnout within the compassion fatigue construct, it is possible to determine whether compassion fatigue is influenced by the negative emotions generated from working in stressful and unsupported clinical environments. Burnout on the other hand involves feelings of hopelessness, difficulty in managing one's work, or difficulties in continuing with one's work effectively. This usually results from physical and/or emotional exhaustion secondary to cumulative stresses of work (Söderfeldt, Söderfeldt, & Warg, 1995). Compassion fatigue and its subcategory of burnout remains an important and ongoing work-related issue in the lives of many doctors and nurses, as well as for healthcare organisations. This is because it affects productivity, quality of life outcomes and patient care (Kelly, Runge, & Spencer, 2015; Khan, Khan, & Bokhari, 2016; McKinley et al., 2020; Smart et al., 2014; West et al., 2006).

1.1 The case for this study

A recent UK National Survey of junior doctors illustrated the scale of the problem (West & Coia, 2019). The survey reported that nearly one in four postgraduate UK trainee doctors and one in five of their trainers experienced burnout to a high or very high degree because of their work. In the British Medical Association's second quarter survey of work-related stress in doctors half the respondents from 422 doctors reported feeling unwell because of work-related stress in the previous year (Penfold, 2018). In another recent study of resilience in doctors 30.7% had low compassion satisfaction, with 31.5% reporting high rates of burnout (McKinley et al., 2020). Similar results were reported five years earlier, in a previous study of 1317 National Health Service (NHS) medical Consultants (Dasan, Gohil, Cornelius, & Taylor, 2015b). In that study, Consultants with lower compassion satisfaction scores were reported to be more irritable with patients or colleagues with associated reported reduction in their

standards of care. They were also more likely to intend to retire early. A similar picture was evident in studies and surveys in nurses working in the NHS. The Royal College of Nursing Employment Survey 2017 painted a picture of a nursing workforce under severe work-related pressures. The report found that approximately 50% of nurses had attended work in the previous year (i.e. 2016) while unwell with stress and mental health issues. The survey also reported that more than a third of nurses were seeking a new job as a result (IES, 2017). From an Occupational Health perspective, these statistics are troubling. The reason for concern is that stress and associated compassion fatigue impacts not only on the clinician's health but also on wider healthcare service delivery. If unaddressed stress and associated compassion fatigue can lead to negative professional behaviours such as disengagement and lack of concern for patients, poor attitudes at work, and absenteeism (Collins & Long, 2003; Poghosyan, Clarke, Finlayson, & Aiken, 2010). Within the medical and nursing professions, consequences of compassion fatigue reported for doctors include a contribution to broken relationships, alcohol misuse, and suicidal ideation (Oreskovich et al., 2012; Shanafelt et al., 2011; Shanafelt, Sloan, & Habermann, 2003). For nurses, consequences reported include staff retention issues (Kashani, Eliasson, Chrosniak, & Vernalis, 2010), increased sharps injuries (Wang et al., 2012), and reduced productivity (Nayeri, Negarandeh, Vaismoradi, Ahmadi, & Faghihzadeh, 2009). Wider impacts of compassion fatigue on the NHS specifically include presenteeism (where clinicians attend work while ill and therefore not productive) and attrition from the professions (Lemaire & Wallace, 2017; MacKusick & Minick, 2010).

Compassion fatigue has also been associated with a wide range of negative emotions such as anger, helplessness or anxiety in doctors and nurses (Bride et al., 2007). It is suggested that these negative emotions often begin slowly and progresses over time (Bride et al., 2007). The negative emotions usually emanate from the clinician's perception that their efforts make no difference and lack of support or resources in the workplace (Giardini & Frese, 2006). Additionally, clinicians often set their negative emotions within a much wider context of work-related factors such as complex patient-clinician relationships, prolonged working hours, high workloads, high pressured environments, and unsupportive

work environments (Lemaire & Wallace, 2017; Orton & Gray, 2015; Wilkinson, 2015). Some evidence suggests that emotional intelligence might buffer the effect of negative emotions in job burnout but the mechanism of this remains unclear (Szczygiel & Mikolajczak, 2018). While several tools exist for measuring compassion satisfaction and fatigue, the Professional Quality of Life Scale (ProQoL) in particular represents one of very few tools specifically designed to measure compassion satisfaction and compassion fatigue in healthcare workers (Stamm, 2010). The ProQoL measures burnout as one of two constructs of compassion fatigue (the other being secondary traumatic stress). In this study, measuring the burnout component using the ProQoL allowed for identifying this specific variable within clinical settings and to explore its relationship with undesirable emotions in doctors and nurses. Additionally, by distinguishing the burnout component of compassion fatigue from secondary traumatic stress in this manner, it is be possible to determine whether compassion fatigue is influenced by the negative emotions e.g. anger, helplessness, anxiety etc generated from working in stressful and unsupported clinical environments. Additionally, gaining a better understanding of the interplay between profoundly negative emotions generated from stressful and unsupported work environments can help modify those risks factors through development of suitable interventions, and thus in turn potentially ameliorate compassion fatigue while simultaneously enhancing compassion satisfaction.

1.2 Thesis overview

This study explored relationships between emotion management processes/strategies, emotional intelligence, compassion satisfaction, and compassion fatigue in doctors and nurses at a large NHS hospital in the United Kingdom (UK). The participants consisted of four hundred and eighty-seven doctors and nurses surveyed with questionnaires between March and November 2017. Chapter one of the thesis provides a general introduction, the rationale for this investigation, and an overall overview. A systematic literature chapter is presented in chapter two. The review identified outcomes and common emotion regulation processes used by doctors and nurses in clinical settings. Findings from the review identified gaps in the existing literature and helped frame the research question for this study. Chapter

three presents a critical analysis of the theories of emotions, emotion regulation, emotional intelligence, and stress. In chapter four an analysis of compassion satisfaction, compassion fatigue and stress theory are presented. Theories in chapters three and four were essential in providing an empirical basis upon which the conceptual model proposed in this study was based, thereby addressing the research aims. The methods and methodology are presented in chapter five where the research question, epistemological, philosophical, and conceptual frameworks are described. The proposed theoretical model for this study and how it contributes to achieving the overall aim of this study is laid out in chapter five. The study design, measurement characteristics of the questionnaire and a strategy for analysing questionnaire responses were explored and justified in chapter five. Results from the questionnaire are analysed and presented in chapter six. That is followed by the final chapter (chapter seven) which covers the discussion, implications, limitations, and future research directions.

1.3 Chapter summary

In this chapter, the case for investigating the relationship between negative emotions generated from frequently stressful and unsupported work environments, compassion satisfaction and compassion fatigue has been made. The chapter has highlighted the problem of compassion fatigue and in that context burnout, and the extent of the problem in the NHS. The chapter has also highlighted that the medical and nursing professions have recognised the scale of the problem and the need to urgently act to address the issue. The next chapter will present findings of a systematic review of the literature. It will identify common emotion regulation processes and outcomes in doctors and nurses within clinical settings. Gaps in the literature will be identified with the aim that it helps address this study's aims and objective.

Chapter Two: Systematic Literature Review

2.0 Introduction

This chapter presents a systematic review of the literature. As the study was exploratory in nature, it aimed to examine the breath of literature on outcomes of common emotion regulation processes/strategies used by doctors and nurses within clinical settings. The review also aimed to identify gaps in the literature that reflected this study's objective. Findings were discussed according to identified themes and used to inform the research question. Implications arising the review are discussed and so are directions of future research.

2.1 Literature review

Emotions are an important and essential aspect of the human condition. They permeate our lives at social and professional levels and influence our thinking and behaviour extensively (Van Kleef, Cheshin, Fischer, & Schneider, 2016). The influence of emotion regulation in humans has also been extensively studied perhaps because of its wide-ranging implications on behaviour, physical and psychological health (Bonanno, 2004; Croskerry et al., 2010; Loewenstein, 1996; Moore, Zoellner, & Mollenholt, 2008; Perugini & Bagozzi, 2001). Whilst adaptive emotion regulation for example confers positive benefits to an individual such as the diminution of negative emotions and increased psychological resilience (Bonanno, 2004), maladaptive emotion regulation strategies do not (Gross & Munoz, 1995). At an organisational level, most healthcare systems emphasise the importance of ensuring high standards of care and the need for an evidence-base for care provided (Fourie & Claasen-Veldsman, 2007; Shapiro, Kannry, Kushniruk, Kuperman, & Subcommittee, 2007). Consequently it is vital that an understanding of the role of emotions on psychological functioning in healthcare professionals and its effects on patient outcomes is understood (Harrison et al., 2015; Heyhoe et al., 2016). Croskerry et al.'s (2010) review on the influence of clinician's emotions in patient safety reported that emotional states of healthcare providers may be influenced by both endogenous and exogenous factors and those factors could lead to affective biases in decision-making which in turn may lead to errors or adverse events. Decision making

in clinicians is for example known to be associated with clinician's emotional responses to their patients, for example whether or not they like a patient (Hall, Horgan, Stein, & Roter, 2002; Kolehmainen & McAnuff, 2014). Similarly, distancing behaviours by doctors are reported to impact on patients' psychological and cognitive functioning resulting in negative perceptions by patients (Ambady, Koo, Rosenthal, & Winograd, 2002). Clinician's own reflective accounts of the role of negative emotions in the context of patient care have suggested that negative emotions do impact on judgment and practice (Amato, 2007). Negative emotional states have also been associated with low work performance including conflict (Rispens & Demerouti, 2016), and seeking significantly more information by clinicians when making clinical judgements and maladaptive coping strategies (Suls & Martin, 2005). The opposite is known to be true for positive emotional states with reported benefits including improved clinical decision-making ability and improved clinician-patient relationships (Isen, 2001; Martin, Kuiper, Olinger, & Dance, 1993). Outcomes from studies on the benefits of the positive emotional states have broadly been in line with Fredrickson's (2001) broaden-and-build theory of positive emotions. A key proposition of that theory is that positive emotions such as joy broadens an individual's momentary thought-action repertoire which in turn broadens mindsets arising from the positive emotions. That contrasts with narrow mindsets which are asserted to be often associated with negative emotions such as the tendency to regress or abandon (Fredrickson, 2001). A second proposition of the theory concerns the consequences of the broadened mindsets whereby broadening an individual's momentary thought-action repertoire perhaps through joyful activities promote discovery of novel and creative actions, ideas and social bonds which in turn builds the individual's personal resources in physical, intellectual, social or psychological dimensions. Of importance is that the resources function as reserves that can be drawn upon to improve the individual's odds of successfully coping and surviving emotional challenges that come their way (Fredrickson, 2001). Notwithstanding the effects of negative emotional states on clinician's health, well-being and work processes, a cogent understanding of the impact of common emotion regulation processes used by doctors and nurses in managing these negative emotional states/experiences remains unclear. This review will investigate this by answering the question below.

2.2 Review question

What are the common emotion regulation strategies used by doctors and nurses in clinical settings and their associated outcomes?

2.3 Method

2.3.1 Literature search

The search process followed the principles outlined in the Preferred Reporting Items for Systematic Reviews and Metanalysis (PRISMA) statement (Moher, Liberati, Tetzlaff, Altman, & Group, 2009). An initial electronic scoping search (using the terms emotion regulation, doctors and nurses, healthcare professionals, systematic reviews) was undertaken using Lancaster University's meta-search engine (*One Search*). The purpose being to ascertain if any previous systematic reviews existed on the topic and none were found. Studies for the review were identified through four electronic database searches namely: Psych Info 1833-2017, Medline 1924-2017, Scopus 1960-2017 and Embase 1974-2017. Searches were undertaken in February and April 2017 and updated on 26 May 2019. Search terms included (emotion AND regulation), (mood AND regulation), (positive AND emotion or mood or affect), (negative AND emotion or mood or affect), (cognitive AND reappraisal), (expressive AND suppression) AND (healthcare AND professionals OR physicians OR doctors) AND (nurses OR midwives [1] OR dentists [2]). The full search strategy is available at appendix 1. Records of all identified citations were initially recorded and then limited to English language citations only. Time constraints did not permit translation of non-English citations. There was no limitation on year of publication of citations. Nineteen thousand and ninety-eight (n=19,098) citations were retrieved from electronic searches of the four databases. After duplicates were removed there were 12,925 citations. Following titles and abstract screening 12,901 citations were excluded. Twenty-four full text articles were read, and four papers excluded (see figure 1). Hand searches of the reference lists of the remaining 20 eligible

[1] *Midwives were classed as nurses in the literature search*
[2] *Dentists were classed as doctors in the literature search*

papers yielded two additional papers. A total of 22 full text papers were selected and reviewed.

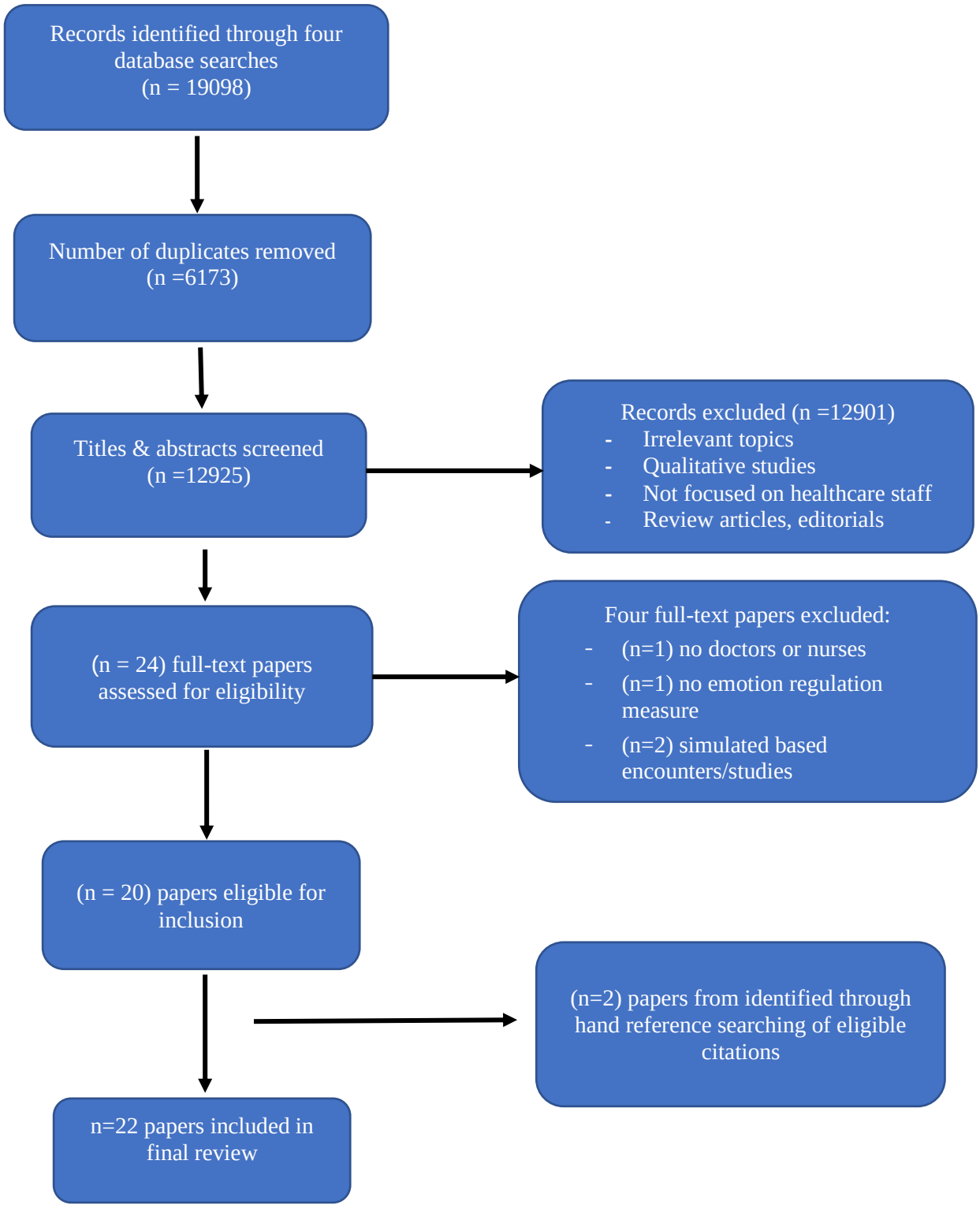


Figure 1. Flow chart of study selection process

2.3.2 Study eligibility

Study eligibility adhered to the PICO format i.e. Problem/Population, Intervention/Indicator, Comparison, and Outcome (Schardt, Adams, Owens, Keitz, & Fontelo, 2007). The selected population were doctors (includes dentists), nurses (includes midwives) with no restrictions on demographic characteristics. The main emotion regulation processes investigated were self-regulatory and taught emotion regulation skills. There were no comparative domains, but the context of study focused on emotion management as assessed by emotion regulation measures in clinicians. Additional contexts included studies which reported the impact of emotion management in clinicians and/or their patients, and studies conducted in healthcare settings (public or private, including acute hospitals and community settings). Outcomes assessed included emotion regulation processes and associated outcomes.

2.3.3 Inclusion criteria

1. Studies with a quantitative design.
2. Studies which were either primary or secondary research.
3. Studies focused on emotion regulation in trained frontline medical or nursing staff (i.e. registered nurses (including midwives) and doctors (including dentists).
4. Studies in which findings relate to the clinician's professional wellbeing (including psychological outcomes) and/or patient outcomes.
5. Studies conducted only in healthcare settings or healthcare related facilities.
6. Studies published in peer review journals and in English only.

2.3.4 Exclusion criteria

1. Qualitative studies. This was because quantitative data was sought in this review to answer the review question, rather than the content of the participant's experience, or meaning or perspectives.
2. Systematic reviews and meta-analysis.

3. Studies which did not refer to emotion/emotion regulation/emotion management in the title, abstract or main body of the study.
7. Studies which did not include qualified frontline medical or nursing staff (i.e. registered nurses and physicians).
4. Studies which did not report findings related to the clinician's professional wellbeing and/or outcomes related to patients.

2.3.5 Screening

During title and abstract screening, a randomly selected sample of 136 citations were independently assessed by the PhD student and his research supervisors achieving inter-rater agreement of 98.5%. Thereafter, it was agreed that the student can continue to screen the remaining titles and abstracts alone. All selected full text articles and those rejected were then independently reviewed by the student's research supervisors for agreement. Discrepancies were resolved through discussion.

2.3.6 Data extraction

A data extraction sheet was devised by the student. It was adapted from previously published material (Taylor, Clay-Williams, Hogden, Braithwaite, & Groene, 2015). The student extracted data from the selected papers which was then independently reviewed by his two research supervisors for agreement. Table 1 displays the contents of the data extraction sheet.

Table 1

Contents of Data Extraction Sheet

1. Study/Reference (author / Year / country)
2. Country of Study e.g. USA, Canada, etc.
3. Aims of the paper (either in abstract or body of paper)
4. Study design (record type e.g. case control, cohort, RCT etc.)
5. Settings location (e.g. Inpatients, outpatients, community etc.)
6. Population/Participants (type and sample size)
7. Measures / Interventions used (e.g. emotion regulation measure or other interventions)
8. Method of data analysis (e.g. correlation or regression analysis etc.)
9. Findings or results of the study

2.3.7 Quality assessment

Methodology quality assessment was assessed using the 16-item quality assessment tool (QATSDD) (Sirriyeh, Lawton, Gardner, & Armitage, 2012). This tool was selected because it offered flexibility in assessing items from different types of designs. Details of the tool's psychometric properties are available elsewhere (Sirriyeh et al., 2012). The tool consists of 16 items, 14 of which apply to either qualitative or quantitative items All 16 items apply to mixed methods papers. Each of the 16 items within the tool have descriptors which are scored on a Likert scale from 0 to 3, (0 = Not at all, 1 = very slightly, 2 = moderately and 3 = complete). Scoring produces a maximum score of 48; (16 x 3) for mixed methods papers, and 42; (14 x 3) for qualitative or quantitative papers. In this review, all studies were quantitative and therefore only 14 scoring items are presented. Quality scores of individual papers can be compared by calculating maximum quality scores in percentages.

2.3.8 Data reporting

Data was reported by descriptive analysis and key findings grouped by relevant themes. While meta-analysis was considered, it was not undertaken because of significant heterogeneity in the studies reviewed.

2.4 Results

To ensure efficient use of the limited word count in this thesis, citations of individual studies have been listed in square brackets in the text below (pages 15 to 30) with details of studies presented in table 2, page 20.

2.4.1 Study designs

Only one study was a randomised controlled trial [8], another a quasi-experimental study [14], a third a prospective correlational field study [4], and another a longitudinal field survey [11]. The remaining 18 studies were all cross-sectional designs.

2.4.2 Study aims

The majority of studies (n=16) examined relationships between doctors and nurses emotion regulation and professional/general wellbeing [1-3,8-9,10,11,13,14-17,18,20,21-22]. One study explored the relationship between emotion regulation in midwives and patient satisfaction [4]. Two studies examined the relationship between doctors emotion regulation and patient satisfaction [5,19], and a further two examined the relationship between doctors emotion regulation and the doctor-patient relationships [11,16]. One study examined associations between emotion regulation and patient related activities [7].

2.4.3 Study settings

Fourteen papers reported studies that were conducted in hospital settings [1,2,4,5-6,8,9,12-15,18-20], three from hospitals and community settings [16,21,22], four in primary care settings [7,10-11,17] and one from other settings [1].

2.4.4 Populations studied

Nine papers focused on studies in doctors [5-8,10,13,15,17,19], six on nurses [1-3,12,14,16], two on a combination of doctors and nurses [9,11] and one on midwives [4]. Four studies were a combination of

doctors, nurses, and allied healthcare professionals [18,20-22]. The authors of these four studies were contacted for information regarding breakdown in the numbers of professionals in their studies. Unfortunately, this information was not received.

2.4.5 Types of emotion regulation strategies commonly used in clinical settings

It was interesting to note that only two studies investigated the use of taught emotion regulation processes [8,14]. Examples of taught processes investigated included coping skills training [8], and emotion regulation training in the form inter-personal skills training, communication training, conflict resolution, attention management, managing mental rumination and managing cognitive processes [14]. The range of taught processes were narrow compared with non-taught processes i.e. individual self-regulation processes in the remaining 20 studies. Individual self-regulation processes included affective empathy, self-compassion, self-judgement [2], cognitive reappraisal [3,5,6,9], expressive (emotional) suppression and emotional awareness [1], surface and deep acting [4,10-13,16,19-20], emotional flexibility [15], and problem-focused coping [18,21]. Outcomes assessed in relation to self-regulation processes were also much more heterogenous and included for example compassion satisfaction and fatigue [2,9,21-22], patient satisfaction [5,6,19], clinic related behaviours [7], emotional exhaustion [11-12,20], depression and anxiety [17] and work performance [18]. This compares with a slightly narrower outcomes assessed with taught processes including occupational stress [14], resilience, and burnout [8].

2.4.6 Types of constructs measured in studies reviewed

Emotion regulation was measured in relation to constructs which included psychological wellbeing [1,3,11,15-16,17,21], professional quality of life [2,9,11,12,20-22], patient satisfaction [4,19], doctor-patient relationships [5-6], patient activity [7], occupational stress [8,14], job satisfaction [13], and work performance [18].

2.4.7 Professional implications of emotion regulation strategies in doctors

Both self-regulatory and taught emotion regulation strategies were found to be beneficial to the professional wellbeing of doctors. Two papers reported positive associations between the use of reappraisal emotion regulation techniques and (i) stress reduction (r=.35) [8], and (ii) psychological wellbeing (r=.50 to .66) [15]. Negative associations were also reported between the use of reappraisal emotion regulation techniques and (i) physician emotional exhaustion (r=-.32) [8], and (ii) physician anxious attachment orientations (r=-.31) [6]. Automatic emotion regulation (i.e. non-conscious emotion regulation) was also found to be negatively associated with emotional exhaustion (β = -.12) [10]. Other emotion regulation techniques specifically surface acting (i.e. the display of emotions required for a task without actually changing how one feels) was found to be (i) positively associated to physician emotional exhaustion (β=.04) [11], (ii) negatively with physician job satisfaction (r=-.39) [13], and (iii) patient satisfaction (β= -.16) [19].

2.4.8 Professional implications of emotion regulation strategies in nurses

As with doctors, self-regulatory and taught emotion regulation strategies were found to be beneficial to the professional wellbeing of nurses. In one study nurses with higher emotion regulation abilities reported greater motivation at work (β=.28), and better wellbeing in the home milieu (β=.22) [1]. In a similar vein demonstrating empathic concern as a form of emotion regulation approach was positively associated with compassion satisfaction (r= .41) and the effect was much stronger than with compassion fatigue (r=.18) [2]. Use of specific components of the self-regulatory processes such as self-compassion was also found to mediate relationships between empathic concern and compassion fatigue [2], with effect size for self-judgment being (β=.07), and self-isolation being (β = .11)]. Deep acting (feeling a specific emotion that one is thinking about) was also associated with a positive work experience (β=.083) compared with surface acting which was negatively associated (β=-.155). The positive effect of emotion regulation training was also evident in another study of nurses which reported mean occupational stress scores improving significantly in an intervention group from 136.6 (pre-intervention) to 113.02 (post-

intervention) [14]. The benefits of emotion regulation training were also underscored in another study which reported that genuine expression of negative emotions predicted emotional exhaustion (r^2=.23), but quite surprisingly the same study reported that positive emotions predicted cynicism and reduced professional efficacy (r^2=.26) but not emotional exhaustion (r^2=.06, p > .05).

2.4.9 Professional implications of emotion regulation strategies in studies that did not clearly distinguish outcomes between doctors and nurses

While outcomes of emotion management processes were not clearly differentiated between doctors and nurses in four studies, they nonetheless remain relevant to purpose of this study. For example, the professional implications of other emotion self-regulatory processes such as happiness and relaxation orientation to positive occupational outcomes like improved performance in doctors and nurses was reported in one study [18]. Similarly, another study reported a negative predictive relationship between compassion fatigue and both ability and trait-based emotional intelligence (β=-.18) [21]. In the same study, emotion focused coping (a less adaptive emotion management strategy) was found to be strongly and positively associated with compassion fatigue (β=.56) [21]. Interestingly in another study compassion satisfaction was predicted by trait emotional intelligence (β=.49) [22], demonstrating the mixed nature of results between emotional intelligence abilities and outcomes in clinicians.

2.4.10 Patient implications of emotion regulation in doctors and nurses

The impact of positive clinician mood states (such as being in a good mood) and negative mood states (such as being in a bad mood) on patient-related clinical activities such as effective communication with patients, medicine prescribing and laboratory investigation requisition underscores the importance of such regulatory processes to patient care [7]. Physician surface acting was negatively correlated with patient satisfaction in one study, but only when patient distress was high [19]. Patient satisfaction with care was also positively correlated with doctor's use of cognitive reappraisal [5]. Interestingly however in the same study expressive (emotional) suppression was positively associated with patient satisfaction

especially in males, but the reason for this was unclear [5]. Doctors use of cognitive reappraisal was observed in another study to be associated with lower patient satisfaction, but this was only the case for patients with higher illness severity [6]. It was also noted in that same study that doctors use of cognitive reappraisal was negatively correlated with doctor's anxious attachment orientation [6].

Table 2

Characteristics of Studies

Study number	Author, year, country	Design	Participants & setting	Aim	Emotion regulation measures	Other measures	Data analysis	Findings
[1]	**(Donoso, Demerouti, Garrosa Hernandez, Moreno-Jimenez, & Carmona Cobo, 2015), Spain**	Cross-sectional	53 hospital and primary care nurses	Explore whether daily emotional demands within nursing work positively affects daily motivation and wellbeing	Difficulty of Emotion Regulation Scale	Emotion Labour Questionnaire Utrecht Work Engagement Scale Positive & Negative Affect Schedule	Hierarchical linear modelling	Nurses with high emotion regulation abilities have more motivation at work (ß = 0.28, p < 0.001) and wellbeing at home (ß = 0.22, p < 0.01)
[2]	**(Duarte, Pinto-Gouveia, & Cruz, 2016), Portugal**	Cross-sectional	280 hospital nurses	Examine if self-compassion may protect for the impact of empathy on compassion fatigue. Explore how empathy and self-compassion relate to professional quality of life.	Interpersonal Reactivity index Self-compassion scale	The professional Quality of Life Scale	Correlation and regression analysis, mediation & moderation analyses	Affective empathy was positively associated with compassion satisfaction (*r*= .41 p < .01) and compassion fatigue (*r*= .18 p < .01) Components of self-compassion (i.e. self- judgement β=0.07, isolation β=0.06, over-identification β=0.11) mediated relationship between affective empathy and compassion fatigue.
[3]	**(Dubert, Schumacher, Locker, Gutierrez, & Barnes, 2016), USA**	Cross-sectional	85 pre-licensure nursing students	Examine relationship between mindfulness and emotion regulation	Emotion Regulation Questionnaire (ERQ)	Mindful Attention Awareness Scale (MAAS) Automated Operation Span Task	Pearson correlation, structural equation path modelling, one-way ANOVA	A direct effect of dispositional mindfulness on emotion regulation (γ11=0.29, p=0.034). MAAS scores correlate significantly with ERQ reappraisal scores (*r*=0.19, p=0.045)

[4]	**(Drach-Zahavy, Buchnic, & Granot, 2016), Israel**	Prospective-correlational field study	24 hospital midwives and 104 birthing women	Examine the link between emotional work strategies and the women's childbirth experience.	Emotional Labour Scale	Childbirth Experience Questionnaire	Linear mixed model analysis	Surface acting used by midwives was negatively correlated with childbirth experience (ß -0.155, $p < 0.05$) whereas deep acting was positively correlated with it (ß 0.083, $p< < 0.05$).
[5]	**(Kafetsios, Anagnostopoulos, Lempesis, & Valindra, 2014), Greece**	Cross-sectional	*Study 1*: 100 patients *Study 2*: 30 hospital doctors and 139 patients	Examined relationship between patients' perceptions of doctors' emotion regulation skills and patient satisfaction. Assessed doctors' emotion regulation competencies and relationships between doctors' emotion regulation and patient satisfaction.	Wong & Law Emotional Intelligence Scale Emotion Regulation Questionnaire	Relational Communication Scale The Generalized Immediacy Scale Patient Satisfaction Questionnaire Rosenberg Self-Esteem Scale Positive & Negative Affect Schedule Patient Satisfaction Questionnaire	Correlations and hierarchical multilevel analysis	Patients' perceptions of doctors' emotional regulation skills was associated with patient satisfaction and communication quality with doctor. Doctors' reappraisal positively associated with patients' satisfaction and positive affect.
[6]	**(Kafetsios, Hantzara, Anagnostopoulos, & Niakas, 2016), Greece**	Cross-sectional	40 hospital doctors and 160 patients	Examined relationships between doctors' attachment orientations, emotion regulation strategies, and patients' satisfaction with doctors' encounters	Emotion Regulation Questionnaire	The (Greek version) Relationship Questionnaire (G-RQ) Patient Satisfaction Questionnaire	Multilevel analyses analysis	Doctors cognitive reappraisal associated with lower satisfaction for patients higher illness severity. Doctors' insecure attachment orientations (avoidant and anxious) were independently associated with lower patient satisfaction based on patient's perceptions of illness severity. But anxious attachment orientation was negatively correlated with cognitive reappraisal ($r=-.31$, $p=.05$)

[7]	**(Kushnir et al., 2011)**	Cross-sectional	188 primary care family doctors	Explore doctor perceptions of the impact of four mood states on five clinic-related behaviours: (talking with patients, prescribing, and referrals for lab tests, diagnostic tests and to specialists	Cognitive weariness sub-scale of the Shirm-Melamed burnout measure	Emotional & Physical Exhaustion sub-scales of the Shirm-Melamed burnout measure	ANOVA	All four mood states (good mood, bad mood, tired and nervous) significantly affected all five clinic-related behaviours both positively and negatively $p < 0.001$. On good mood compared with negative mood days physicians talked more, prescribed less and also referred less
[8]	**(Mache, Baresi, Bernburg, Vitzthum, & Groneberg, 2016), Germany**	Randomized control trial	78 hospital physicians	To evaluate outcomes following coping skills training	Emotion Regulation Skills Questionnaire	Perceived Stress Questionnaire Copenhagen Psychosocial Questionnaire Maslach Burnout Inventory Brief Resilient Coping Scale	ANCOVA	Improvement in emotion regulation and resilience was associated with reduced total stress levels [emotion regulation $r = -0.35$, $p < 0.01$; resilience $r = -0.39$, $p < 0.01$] and decreases in the emotional exhaustion subscale; [emotion regulation $r = -0.32$, $p < 0.01$, resilience $r = -37$, $p < 0.01$].
[9]	**(Măirean, 2016), Romania**	Cross-sectional	190 hospital nurses and physicians	Examined the relationship between two emotion regulation strategies (cognitive re-appraisal & expressive suppression) and secondary traumatic stress and compassion satisfaction	Emotion Regulation Questionnaire	The Professional Quality of Life Scale (ProQoL) The Secondary Traumatic Stress Scale	Correlation and hierarchical regression analysis	Negative associations between cognitive reappraisal and secondary traumatic stress symptoms (intrusions $r = -0.19$, $p < 0.01$, avoidance $r=-0.34$, $p < 0.01$, arousal $r =- 0.39$, $p < 0.01$), but positively associated with compassion satisfaction ($r = 0.27$, $p < 0.001$). Expressive suppression positively associated with arousal ($r=0.16$, $p = 0.49$).

[10]	**(Martinez-Inigo, Totterdell, Alcover, & Holman, 2007), Spain**	Cross-sectional	345 primary care general practitioners	Examined how use of different emotion regulation strategies relates to doctor's emotional exhaustion, testing psychological effort as a potential intrapersonal mediator	Emotion Labour Scale	Work Satisfaction Module Questionnaire for Health Professionals Psychological Effort measure Maslach Burnout Inventory	Hierarchical multiple regression	Automatic regulation of emotions was negatively associated with doctors' emotional exhaustion ß = - 0.12, $p < 0.01$) with the mediating intrapersonal factor (psychological effort) helping to explain the association
[11]	**(Martínez-Íñigo & Totterdell, 2016), Spain**	Longitudinal field two wave survey	233 primary care general practitioners and nurses	Examine the relationship between emotion regulation strategies and emotional exhaustion, mediated by perceptions of fairness in interactions with clients	Emotion Labour Scale	Distributive Justice Index Maslach Burnout Inventory	Structural equation modelling	Surface and deep acting were respectively related negatively (β= -.14, $p<.01$), and positively (β=.22, $p<.001$) to perceptions of fairness in interactions with clients. The indirect effect of surface acting on emotional exhaustion was significant β= .04, $p <.01$ with fairness in interactions with clients as a mediator
[12]	**(Packell & Narayan, 2013), USA**	Cross-sectional	85 nurses from clinics and hospitals	Examined the predictive relationships between distinct types of emotion regulation strategies (genuine, faked & supressed) and burnout	Discrete Emotions Emotional Labour Scale (DEELS)	Maslach Burnout Inventory	Hierarchical regression analysis	Genuine expression of negative emotions predicted emotional exhaustion $p < .001$, $R^2 = 0.23$. Positive emotions predicted cynicism $p < .05$, $R^2 = 0.26$ and reduced professional efficacy $p < .05$, $R^2 = 0.26$ but not emotional exhaustion $p > .05$, $R^2 = 0.06$

[13]	**(Psilopanagioti, Anagnostopoulos, Mourtou, & Niakas, 2012), Greece**	Cross-sectional	130 hospital physicians	Investigate relationship between surface acting component of emotional labour, emotional intelligence and job satisfaction	Wong Law Emotional Intelligence Scale	General Index of Job Satisfaction Dutch Questionnaire on Emotional Labour (D-QEL)	Hierarchical multiple regression analysis.	Use of emotion dimension of emotional intelligence was positively correlated with job satisfaction ($r = 0.42$, $p < 0.001$). Surface acting was negatively correlated with job satisfaction ($r = -0.39$). Self-emotion appraisal correlated negatively with surface acting ($r = -0.20$, $p < 0.01$) and influenced job satisfaction
[14]	**(Saedpanah, Salehi, & Moghaddam, 2016), Iran**	Quasi-experimental intervention study	60 hospital intensive care and critical care nurses	Investigate the effect of emotion regulation training on occupational stress	Expanded Nurse Stress Scale	None	Mean, t-tests and chi-square tests.	Mean occupational stress score in intervention group, post-intervention decreased from 136.6 to 113.02 ($p = 0.001$).
[15]	**(Simon C & Durand-Bush, 2015), USA**	Cross-sectional	132 hospital physicians	Examine if emotional self-regulation capacity can predict psychological wellbeing	Self-Regulation Questionnaire	Scales of Psychological Wellbeing	Regression analysis and MANOVA	Self-regulatory capacity had a strong positive relationship with all dimensions of physicians' psychological well-being ($0.50 – 0.66$, $p < 0.01$) except autonomy (0.46, $p < 0.01$)
[16]	**(Schmidt & Diestel, 2014), Germany**	Cross-sectional	195 nurses from a hospital and three nursing homes	Examined whether cognitive control deficits as an individual vulnerability factor exert stronger influence with surface acting than deep acting on job strain	Emotion Labour Scale	Cognitive Failures Questionnaire Maslach Burnout Inventory	Hierarchical regression analysis	A significant positive relationship reported between surface acting and cognitive control deficits on indicators of job strain; exhaustion: $\Delta R^2 = 0.05$, $p < 0.01$; depressive symptoms: $\Delta R^2 = 0.004$, $p < 0.01$; sum of days absent, $\Delta R^2 = 0.04$, $p < 0.01$. Deep acting was unrelated to job strain.

[17]	**(Uncu, Bayram, & Bilgel, 2007), Turkey**	Cross-sectional	274 physicians in primary care	Examine the relationship between work related emotional perceptions and assess reactions in terms of stress, anxiety and depression	Job Related Affective Well-being Scale (JAWS)	Depression Anxiety Stress Scale	Correlation and hierarchical regression analysis	Negative correlations between total JAWS scores and the Depression Anxiety Stress Scale ($r = -0.52$, $p < 0.01$)
[18]	**(Wu, Chen, & Li, 2014), Taiwan**	Cross-sectional	157 healthcare personnel including nurses from different hospitals	Examined relationship between emotion regulation strategies, emotional intelligence, and work performance.	Emotion Regulation Strategy Inventory	Task & Contextual Performance Questionnaire Wong's Emotional Intelligence Scale	Correlation analysis	Four emotion regulations strategies (problem solving, happiness orientation, seeking social support & relaxation orientation) mediated the relationships between emotional intelligence and task & contextual performance. Mediating explanatory power for task performance = 24% and contextual performance = 28%
[19]	**(Yagil & Shnapper-Cohen, 2016), Israel**	Cross-sectional	46 physicians and 230 patients in two hospitals outpatient clinics	Examined how regulation of physician's emotions affects patient satisfaction	Emotional Labour Scale	Patient satisfaction Questionnaire Illness perception Questionnaire Physician Patient Acquittance Measure	Hierarchical linear modelling	Physician regulation their emotions (surface acting) was negatively correlated with patient satisfaction when patient distress was high (ß= -0.16, $p < 0.05$).
[20]	**(Zammuner, Lotto, & Galli, 2003), Italy**	Cross-sectional	180 hospital employees including doctors and nurses.	Explore how emotion regulation affects healthcare workers' jobs, the kinds of emotion regulation processes needed, frequently, antecedents, consequences and whether emotional labour might be a causal component of burnout	Emotional Labour Scale	Maslach Burnout Inventory Job Involvement Scale Positive & Negative Affect Scale Satisfaction with Life Scale	Correlational analysis	Surface acting positively associated with emotional exhaustion ($r=0.31$, $p<0.01$) and depersonalization ($r=0.21$, $p<0.01$) and negatively with deactivated affect ($r=-0.23$, $p<0.01$). Deep acting positively correlated with depersonalization ($r=0.15$, $p< 0.05$) and negatively correlated with social desirability ($r=-0.26$, $p<0.01$)

[21]	**(Zeidner, Hadar, Matthews, & Roberts, 2013), Israel**	Cross-sectional	83 mental health practitioners and 93 primary care and hospital physicians from seven hospitals and six private clinics	Investigated the role of personal and professional factors in compassion fatigue	Schutte Self-Report Inventory (SSRI) Emotion Management Subscale of the Mayer-Salovey-Caruso Emotional Intelligence Test	Coping Inventory in Stressful Situations Mood Subscales of the Dundee Stress State Questionnaire Professional Quality of Life - Compassion satisfaction /Fatigue Subscales	MANCOVA	Ability-based emotion management (ß = - 0.18, $p < 0.01$) and trait emotional intelligence (ß = - 0.18, $p < 0.05$),were negatively associated with compassion fatigue. Less adaptive (emotion focused coping) was positively related to compassion fatigue (ß= 0.56, $p < 0.01$)
[22]	**(Zeidner & Hadar, 2014), Israel**	Cross-sectional	83 mental health practitioners and 93 primary care and hospital physicians from seven hospitals and six private clinics	Examined individual variables (personal factors) associated with compassion satisfaction	Schutte Self-Report Inventory (SSRI) Emotion Management Subscale of the Mayer-Salovey-Caruso Emotional Intelligence Test	Coping Inventory in Stressful Situations Mood State Questionnaire of the Dundee Stress Questionnaire Compassion satisfaction Subscale of the Professional Quality of Life Scale	Hierarchical regression analysis	Compassion satisfaction was predicted by trait emotional intelligence(β=.49), positive affect and problem-focused coping.

2.4.11 Methodological quality assessment

The majority of the papers reviewed were cross-sectional except for two [8,14] which were quasi-experimental and a randomized control trial, respectively. Two papers achieved ≥ 70% of the maximum quality score i.e. (≥ 30 points) [11,12] and fourteen achieved ≥ 54% but < 70% (≥ 23 – 29 points) of the maximum quality score [1-5,8-10,13,14,15-16,19,21-22]. Five papers achieved < 54% (< 23 points) of the maximum quality score [6,7,17,18,20]. The median quality score for all papers was 25 points (59%), and the lowest score was 17 points (40%) [20]. Results are displayed in table 3, page 28.

Table 3

Methodological Quality Rating Scores

Quality rating scoring 0 = Not at all, 1 = Very slightly, 2 = Moderate, 3 = Complete												
Author **Quality assessment criteria**	Donoso et al 2015	Duarte et al 2016	Dubert et al 2016	Drach-Zahavy 2016	Kafetsios 2014	Kafetsios 2016	Kushnir et al 2011	Mache et al 2016	Mãirean 2016	Martínez-Íñigo 2007	Martínez-Íñigo 2016	Packell & Narayan 2013
Explicit theoretical framework	2	3	3	3	3	3	1	1	3	2	3	3
Statement of aims/objectives in main body of report	3	3	3	3	3	3	3	3	3	3	3	3
Clear description of research setting	2	2	3	1	1	1	2	2	3	2	2	2
Evidence of sample size considered in terms of analysis	0	1	1	1	0	0	0	0	0	0	0	0
Representative sample of target group of a reasonable size	2	1	1	1	2	1	2	3	2	2	2	3
Description of procedure for data collection	1	1	2	3	1	1	1	3	2	3	2	3
Rationale for choice of data collection tool(s)	2	0	1	0	2	2	0	1	2	1	1	1
Detailed recruitment data	2	2	2	1	1	1	2	3	3	2	3	3
Statistical assessment of reliability and validity of measurement tool(s)	1	2	2	2	2	1	2	1	2	2	2	2
Fit between stated research question and method of data collection	2	3	3	2	3	3	2	3	3	2	3	2
Fit between research question and method of analysis	3	3	3	3	3	3	3	3	3	3	3	3
Good justification for analytic method selected	2	0	1	1	1	0	1	1	1	1	3	3
Evidence of user involvement in design	0	0	0	0	0	0	0	1	0	0	0	0
Strengths and limitations critically discussed	3	2	2	2	1	1	3	2	2	2	3	2
Total quality score (Maximum score = 42)	***25***	***23***	***27***	***23***	***23***	***20***	***22***	***27***	***29***	***25***	***30***	***30***
Comparison of quality scores in percentage	***59%***	***54%***	***64%***	***54%***	***54%***	***47%***	***52%***	***64%***	***69%***	***59%***	***71%***	***71%***

Quality rating scoring 0 = Not at all, 1 = Very slightly, 2 = Moderate, 3 = Complete										
	Psilopanagioti et al 2012	Saedpanah et al 2016	Simon & Durand 2015	Schmidt & Diestel 2014	Uncu et al 2007	Wu at al 2014	Yagil & Shnapper 2016	Zammuner et al 2013	Zeidner et al 2016	Zeidner& Hadar 2014
Explicit theoretical framework	3	1	1	3	1	1	2	1	3	3
Statement of aims/objectives in main body of report	2	3	3	3	3	1	3	3	1	3
Clear description of research setting	1	3	1	3	2	1	2	1	2	2
Evidence of sample size considered in terms of analysis	0	3	0	0	0	0	0	0	0	0
Representative sample of target group of a reasonable size	2	2	3	2	2	2	2	2	2	3
Description of procedure for data collection	1	2	2	1	2	2	2	1	2	2
Rationale for choice of data collection tool(s)	1	1	2	0	2	0	0	0	2	1
Detailed recruitment data	2	2	1	2	2	2	2	1	2	2
Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only)	2	2	2	1	1	1	1	1	2	2
Fit between stated research question and method of data collection (Quantitative only)	3	3	2	3	2	3	3	2	3	3
Fit between research question and method of analysis (Quantitative only)	3	3	3	3	2	3	3	3	3	3
Good justification for analytic method selected	3	0	1	2	1	2	1	1	1	1
Evidence of user involvement in design	0	0	0	0	0	0	0	0	1	0
Strengths and limitations critically discussed	2	1	2	2	1	1	2	1	2	2
Total quality score (Maximum score = 42)	***25***	***26***	***23***	***25***	***21***	***19***	***23***	***17***	***26***	***27***
Comparison of quality scores in percentage	***59%***	***61%***	***54%***	***59%***	***50%***	***45%***	***54%***	***40%***	***61%***	***64%***

2.4.12 Emotion regulation outcome measures (tools) used in studies

Emotion regulation outcome measures were heterogenous and comprised of fourteen different questionnaires types all of which had been previously validated and widely used in studies (table 4, page 30). The two most commonly used measures were the Emotion Labour Scale [4,10-11,16,19-20] and the Emotion Regulation Questionnaire [3,5,6,9].

Table 4

Summary of Emotion Regulation Outcome Measures (Tools)

Type of measure/intervention	**Number of studies**	**Studies**
Emotion Labour Scale	6	[4,10-11,16,19-20]
Emotion Regulation Questionnaire (ERQ)	4	[3,5,6,9]
Emotion Management Subscale of the Mayer-Salovey-Caruso Emotional Intelligence Test	2	[21,22]
Difficulty of Emotion Regulation Scale	1	[1]
Interpersonal Reactivity Index	1	[2]
Cognitive Weariness Sub-scale of the Shirm-Melamed burnout measure	1	[7]
Emotion Regulation Skills Questionnaire	1	[8]
Discrete Emotions Emotional Labour Scale (DEELS)	1	[12]
Wong Law Emotional Intelligence Scale	1	[5,13]
Expanded Nurse Stress Scale	1	[14]
Self-Compassion Scale	1	[2]
Self-Regulation Questionnaire	1	[15]
Job Related Affective Well-being Scale	1	[17]
Emotion Regulation Strategy Inventory	1	[18]

2.5 Discussion

Effective emotion management within clinical settings remains of particular importance for doctors and nurses because of its association with the clinical, health and well-being outcomes. From this review, eleven commonly used self-regulatory and taught emotion management strategies were identified. They are cognitive reappraisal, expressive suppression, surface acting, deep acting, problem solving, happiness orientation, seeking social support, relaxation orientation, affective empathy, self-compassion, and emotion focused coping. In particular, cognitive appraisal and deep acting were associated with positive outcomes like work satisfaction, reduced occupational stress and clinician health and well-being. Surface acting and emotion focused coping were on the other hand associated with negative outcomes including compassion fatigue, patient dissatisfaction and two components of burnout namely emotional exhaustion and depersonalization. Problem solving, happiness orientation, seeking social support and relaxation orientation were shown to mediate relationships between emotional intelligence and task performance, while affective empathy and components of self-compassion were respectively associated with compassion satisfaction and a mediating relationship with compassion fatigue. Additionally, emotional intelligence was found to be associated with clinician compassion satisfaction and compassion fatigue although the mechanism for this remains unclear.

Despite evidence suggesting that taught emotion regulation techniques like cognitive reappraisal are effective in regulating emotions in clinical settings with associated greater retention of cognitive resource, the use of taught strategies has not been widely promoted in the wider literature (Butler et al., 2003). The potential benefits of promoting their use within clinical settings is that doctors and nurses who may not be adept at deploying self-regulatory techniques can benefit from being taught those techniques to help them manage negative emotional states in work. This can result in a concomitant positive effect of minimising compassion fatigue which if unaddressed is thought to be precursor to developing burnout (Thompson et al., 2014). Considering this, it is essential that this approach is seriously considered on a much wider scale because of evidence pointing clearly to the role of negative

affectivity on job performance e.g. unproductive and counterproductive organizational behaviours such as absenteeism and increased occupational injury (Kaplan, Bradley, Luchman, & Haynes, 2009). In contrast, relationships between positive affectivity and work performance is much more conducive. For example it was proposed and tested in a model examining the mediating effects of positive mood states in employees and task performance with findings showing that positive mood states predicted task performance indirectly through interpersonal and motivational processes (Tsai, Chen, & Liu, 2007). The interpersonal processes encompassed employees helping each other and in turn receiving similar support, while the motivational aspect included emotional self-regulatory measures such as self-efficacy and task persistence. A question which therefore arises is what the mechanism is which allows for favourable outcomes when techniques like cognitive reappraisal are used to induce positive emotional states and that in turn leading to better worker work performance. The answer may lie in Frederickson's broaden-and-build theory which lends credence to how positive affectivity may influence work performance (Fredrickson, 2001). In that theory positive affective states are asserted to broaden not only behavioural repertoires but also improve behavioural flexibility and increase attentional scope, all of which are attributes which can enhance job performance and by inference greater compassion satisfaction and less compassion fatigue.

Another important observation from the findings was the significantly heterogeneous nature of emotion regulation measures used in the studies reviewed. In particular, scales used in measuring taught emotion regulation strategies e.g. cognitive reappraisal were not in the majority. A possible explanation for this might the manner in which emotional regulation was conceptualised in the studies reviewed .In the main it was conceptualised in relation to managing emotions to meet specific work demands, work outcomes and/or work performance rather that a variable to improve psychological outcomes in the clinician which in turn can improve work outcomes. It is of course important that cognisance is taken of the fact that defining the constructs of work demands, work outcomes and work performance in themselves can vary significantly (Brotheridge & Grandey, 2002). Nonetheless, this review has demonstrated some strengths,

particularly regarding the number of studies reviewed most of which were conducted within the last ten years indicating an increase in researcher interest in this area of study. Limitations are discussed in the next section.

2.6 Limitations

The studies represented in this review are associated with a number of limitations. Firstly, the majority were of a cross-sectional design and therefore attributing causal relationships is not possible. All of the studies were published in the English language which could potentially be a source of publication bias. Few of the studies had control groups and the relevance of this is that in applying the results, the absence of control groups renders it difficult to distinguish whether specific effects observed were a feature of a particular group or setting. The use of questionnaire measures in all of the studies reviewed may present the possibility of reporting bias. None of the studies reviewed however considered or reported the likelihood role of common method variance in their results. Additionally, the generalisability of findings from this review could be limited by small sample sizes in some studies, the use of convenience samples other studies, and participant self-selection other studies. Absence of summary data for comparing outcomes in some studies e.g. those that had mixed and undefined proportions of nurses and doctors) also limits generalisability. The lack of random sampling in the majority of studies means that the impact of selection bias on results cannot be entirely eliminated. There was also notable heterogeneity of studies and outcome measures across all twenty-two papers. This made direct comparisons between studies challenging and this also precluded undertaking a meta-analysis. Notwithstanding that, some heterogeneity is expected when investigating concepts such as emotion regulation which is not expected to be a one-dimensional construct. Finally, the variety of countries from which studies were drawn from presents a limitation because different countries have different healthcare systems and by inference different working conditions and practices which ultimately could influence clinicians emotion regulation strategies and associated outcomes.

2.7 Future research directions

The findings from this study demonstrate that commonly used emotion regulation strategies such as cognitive reappraisal are associated with positive work outcomes like clinician work satisfaction and a reduction in occupational stress. Findings also demonstrate that clinician emotional intelligence is associated with compassion satisfaction and fatigue. However, it remains unclear what the mechanisms are by which these associations occur, and the extent to which cognitive reappraisal and/or emotional intelligence influences compassion satisfaction and fatigue in clinicians. These gaps in knowledge have informed the research question and proposed theoretical model in this study.

2.8 Chapter summary

This chapter explored the literature in a systematic manner and reported findings on common emotion regulation strategies used by doctors and nurses in clinical settings. The review has highlighted the role of both self-regulatory and taught emotion strategies in doctors and nurses and reported that taught emotion regulation strategies where not widely reported or promoted in the literature. Being emotionally intelligent was found to be associated with compassion satisfaction and fatigue but a gap remains in the literature in proving specific predictors of compassion satisfaction and fatigue and what the mechanism is. From the gaps identified, it was essential to gain an understanding of the theories and constructs underpinnings of emotions, emotion regulation, emotional intelligence, stress, compassion satisfaction and compassion fatigue in order to develop an appropriate theoretical model for this study. The next two chapters provide an overview of these theories and constructs.

Chapter Three
Theories of Emotions, Emotion regulation and Emotional intelligence

3.1 Introduction

This chapter provides an overview of theories relating to emotions, emotion regulation and emotional intelligence. The chapter will discuss what emotions are, the neurobiological basis of emotions, historical measurement of emotions, and the role of emotions in organisations. Emotion regulation theory and the theory of emotional intelligence are also critically examined. Their relationship with aspects of work such as work performance, occupational stress, and job involvement are also presented.

3.2 What are emotions?

While many neuroscientists and psychologists agree that emotions influence human thinking and behaviour, there is no universal consensus on how emotions are defined. However, emotions have historically been described using language such as 'feelings' and 'affect' which in themselves may be used interchangeably. This definitional issue can be attributed to the fact that emotions operate at many different levels of reality including behavioural, biological, neurological, social, situational, and cultural. Depending therefore on which aspect of emotion a researcher or theorist is interested in, a different definition may apply. For example, if a researcher is interested in the physiological aspects of emotions, then emotions in that context could likely to reflect arousal of bodily physiological systems. Similarly, if a researcher was interested in the cultural aspects of emotions, then it is likely that cultural ideologies, rules and vocabularies will apply (Turner, 2009). In this PhD study focus is on the psychological aspects of emotions. This means exploring cognitive and subjective emotional experiences of participants. Therefore, depending on which combination of elements a researcher wishes to study the definition of emotions can vary. In an attempt to resolve this age-old conundrum of how emotions are defined, Izard (2010) surveyed prominent emotion theorists and researchers on their working definitions of emotion. The results indicated that that emotions could not be defined as a unitary concept and that researchers frequently attributed quite different yet heuristic interpretations to what emotions were. In explaining

the core features of emotion, Gross and Thompson (2007) described emotion generation as a series of stages including firstly attending to a situation that was perceived as relevant to the individual's needs or goals. While the goals could be enduring, transient, central, or peripheral to the individual, it is the situational meaning for the individual that gives rise to an emotion. Other emotion researchers have posited that emotions are multifaceted describing emotions as whole-body experiences that are loosely linked to changes in the subjective individual experience such as their behaviour or peripheral bodily physiology (Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005). These multisystem changes are usually categorised by the intensity, frequency, type, and duration of the response (Davidson, 1998). Additionally, these multisystem changes associated with emotions are rarely obligatory and emotions do have an imperative quality; of themselves, that is, they can interfere with daily activities of the individual and impact on their awareness independent of other factors. It is argued that it is this core feature of emotion that is critical in the analysis of emotion regulation because it is this element that makes such regulation possible (Gross & Thompson, 2007). Taken together these core features establish what Gross & Thompson (2007) refer to as the 'modal model' of emotion, which is defined as "a person-situation transaction that compels attention, has particular meaning to an individual, and gives rise to a coordinated yet flexible multisystem response to the ongoing person-situation transaction" (Gross & Thompson, 2007, p. 5).

Adding to the definitional issues associated with emotions is the continuing academic debate about whether universal primary and secondary emotions exist. Within the fields of psychology, neurobiology and some social science disciplines it is commonly observed that four so-called primary emotions of happiness, sadness, anger and fear are frequently cited in the literature with arguments that these emotions are firmly wedged within the human psyche and their expression spans many unrelated cultures across the world (Ekman & Friesen, 1971; Turner, 2000). Similarly, the so-called secondary and tertiary emotions such as disgust, envy, jealousy, hurt and suffering which although less frequently

cited in the emotion literature are sometimes argued to result from combinations of primary emotions although evidence for this is sparse.

3.3 Overview of the major theories of emotions

In his famous treatise, Darwin (1872) sought not only to understand natural selection of species of organisms but also extending his understanding to how emotions may have evolved in these species. He argued as part of his work that certain emotions like love and fear appeared to be expressed universally in humans populations around the world, even in populations living in very remote parts of the world where interaction with the outside world is little, thus evoking the possibility that emotions may be innate rather than learnt. Darwin also observed that certain emotions appeared to be expressed similarly across certain species of living entities, particularly those closely related, thus suggesting the possibility of a heritable component to emotions in those species. With the rise of experimental brain research in the late nineteen century competing theories of what emotions were began to emerge. In his seminal paper on what an emotion was, James (1884) proposed that an emotion was no more than an experience whereby a set of bodily changes occurred in response to emotive cues in the individual's environment. That description suggests that if an individual were for example to feel frightened following an event or incident, it is their perception of the incident and the bodily changes flowing from it that characterise the emotion they experience. According to James (1884) therefore, a sequence akin to event, arousal, interpretation and emotion occurs. This leads to different patterns of bodily changes accounting for different emotions the individual experiences. James (1884) suggests therefore that it is the individual's perception of bodily changes as they occur which characterises the emotion. A similar theory was posited by Lange (1885) leading to the James-Lange theory of emotions. The basic premise underpinning the James-Lange theory was that physiological arousal initiated the experience of emotion rather than the other way round i.e. a feeling first, followed by a physiological (bodily) response (Lange, 1885). That theory has however been variously criticised as being incomplete in its conceptualisation. A major critic

being the Canon-Bard theory which espoused that physiological changes followed emotions, rather than the other way round (Cannon, 1927). Cannon (1927), points to the failure of autonomic activity to distinguish between different emotional states in animal experimental studies where surgical separation of viscera from the brain did not impair emotional behaviour. Similarly, Maranon (1924) reported that physiological arousal alone was not sufficient to cause emotion. This asserted was based on studies demonstrating that only two thirds of participants injected with adrenaline reported physical symptoms. Notwithstanding these polarising positions, some theorists like Lazarus (1982) have argued that the occurrence of emotions is purely cognitive. Lazarus (1982) has proposed that cognitive activity in the form of judgements, evaluations or thoughts are required for emotions to occur. From that perspective emotions require intentionality and this process may either be conscious or unconscious and may or may not require conceptual processing. Similarly, Fredrickson (2001) suggests that emotions are internal multidimensional states experienced by individuals over a period of time which usually follows personal cognitive interpretation (i.e. appraisal) of an antecedent event. Fredrickson's (2001) also suggests that irrespective of whether the appraisal process is conscious or unconscious, it inevitably results in physiological, physical or cognitive changes. Other theoretical perspectives such as the Affective Events Theory have attempted to explain emotions from a communication-based perspective focusing on causes, structures, and consequences. The theory specifically suggests that emotions are caused and influenced by events, which in turn influences attitudes and behaviours. The same theoretical perspective postulates that the influence of time is crucial, and it is proposed that an individual experiences emotion episodes that encompass a series of emotional states extended over time, and they are usually organized around an underlying theme (Weiss & Cropanzano, 1996).

Hybrid theories on what emotions are have also emerged in the literature. An example is the two-factor theory of Schachter & Singer (1962). In that theory the individual is thought to contribute to their own sense of emotional experience following a combination of their individual perception of an external

stimulus and cognitively self-appraising it i.e. a somatic-cognitive interaction. Another notable example is the Component Process Model of Scherer (1987) which describes emotions more widely as the synchronisation of many different bodily and cognitive systems within an overall process. In that process model it is suggested that low-level cognitive appraisals, particularly the processing of relevance can trigger of bodily reactions, behaviours, actions, and subjective feelings. This model identifies emotions as serving five major functions namely (i) evaluating a stimulus event for their relevance to the individuals wellbeing, (ii) regulation of internal states to prepare an organism for action, (iii) activation of specific motives and tendencies, (iv) expressing and communicating reactions and intentions, (v) monitoring and focusing on changes in organismic states. In the model, evaluating stimulus events for relevance as well as appraising them for coping potential is characteristic of the cognitive component, while the regulation of the organismic system, the internal milieu, and energy supply for behavioural activity correspond to the neurophysiological component. The model also states that preparation and direction of specific action tendencies corresponds to the motivational component while the expressive component corresponds to communication of intention and reaction. Finally, reflection and monitoring correspond to a subjective feeling component. The model therefore defines emotions as encompassing "a sequence of interrelated, synchronised changes in the states of all or most of the five organismic sub-systems, in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism" (Scherer, 1987, p.7).

Additional useful theories of what emotions are can be gleaned from sociological perspectives. Kemper (1978) for example proposed that emotions are feelings that emerge as a result of interpersonal events during social interactions when an individual assumes positions on two relational levels, namely status and power. He proposed that affirming an individual's status or power for example generates feelings whose quality is contingent on the pattern of change, for example exalting an individual's status is likely to generate positive love-related emotions and vice versa. Hochschild (1983) on the other hand views

emotions as an acceptable display of feelings within human interactions which are ideologically and culturally acceptable. In contrast the Affect Control Theory proposes that emotions are transient physical and subjective states that are influenced by social activities intended by the originating source to fit feelings to an occurring situation (Heise, 2007). In effect the Affect Control Theory suggest that emotions are intuitive signals to the individual about their understanding of events in a specific situation, and also signs to be observed by others about the individual's identity in that particular situation. In summary therefore, it is clear from all of these theories that irrespective of the theory adopted, emotions can exert both physical and psychological consequences in the individual such that an individual can attribute consequences either internally or externally with resultant positive or negative behaviours (Gooty, Gavin, & Ashkanasy, 2009). It has been the case historically that organisations have been slow in recognising the role of emotions in the workplace and studies relating to the role of emotions in organisational life have instead focused largely on concepts such as satisfaction and commitment to organisations (Locke, 1976; Reichers, 1985). Consequently, the role of emotions has remained esoteric in many work environments including the healthcare sector.

3.4 Neurobiological basis of emotions

Theories relating to the neurobiological basis of emotions have been formulated largely through neural mapping of the mammalian brain. This approach has traditionally explained human emotion as either a pleasant or an unpleasant mental state controlled within the limbic system. To understand human emotion regulation an appreciation of the basic neurobiological systems of brain processes relevant to emotion processing is important. Firstly, it is vital to appreciate that neurobiological regions located on the higher and lower neuroaxis in the brain apply mutual regulatory influences such that ‘a top-down’ and ‘bottom-up’ regulatory influence exist between them. ‘Top-down’ regulatory effects typically include influences from the prefrontal cortex to the amygdala, while ‘bottom-up’ influences typically include influences from the limbic system to higher cortical areas of the brain (Thompson, Lewis, &

Calkins, 2008). Cortical areas higher on the neuroaxis were previously thought to exercise inhibitory effects on lower limbic areas, but more contemporary neuroimaging evidence suggests that cortical and limbic areas operate complementarily in respect of responses to emotion related events (Kober et al., 2008). In a meta-analysis of 162 neuroimaging studies, Kober et al. (2008) reviewed participants responses to emotion-related tasks and reported that numerous frontal areas were found to co-activate with multiple limbic areas but with little evidence that the co-activations were of an inhibitory nature. Similar findings have been reported in other studies, e.g. (Ochsner et al., 2009). Taken together, what these findings suggest is that frontal area co-activation with multiple limbic areas do not solely influence emotional control, but also influence the recruitment of cognitive-perceptual processes relating to emotion activation (Lewis & Todd, 2007). In addition, the role of neuroaxis circuits which link the amygdala, limbic structures and the anterior cingulate areas of the brain also help explain the cingulate's role in influencing emotional appraisals and self-regulatory processes (Cardinal, Parkinson, Hall, & Everitt, 2002). This neuroaxis circuit mechanism therefore suggests that emotion regulation should be regarded not solely an inhibitory process, but rather as a complex mechanism of activities often involving bidirectional associations between different emotion relevant regions and thereby reinforcing a systems perspective of how emotions may be regulated (Ochsner et al., 2009; Scherer, Bänziger, & Roesch, 2010). A second reason for appreciating the neurobiological systems basis of brain processes relevant to human emotion processing relates to known associations between neurobiological mechanisms and their influence on early life experiences including human developmental histories (Calkins & Hill, 2007). In that respect understanding the role of neural and neuroendocrine arousal systems and their association with emotion regulation is essential. For example, the maturation of neural and neuroendocrine arousal systems (known to be functional in new-born babies) during the early developmental years helps explain why diminishing emotional lability and increasing concurrent greater self-control is seen in a developing child (Gunnar & Vazquez, 2015).

Regarding the neurobiology of two commonly used emotion regulation strategies i.e. cognitive reappraisal and expressive (emotional) suppression, studies have demonstrated that cognitive reappraisal operates by activating areas within the prefrontal cortex which in turn acts to inhibit the amygdala (which is associated with negative emotions) (Ochsner & Gross, 2007; Ochsner et al., 2004; Phan et al., 2005). As with cognitive reappraisal, expressive (emotional) suppression similarly increases activation in the prefrontal regions particularly the dorsolateral and ventrolateral areas, but unlike cognitive reappraisal, expressive suppression does not inhibit activation of the amygdala (Goldin, McRae, Ramel, & Gross, 2008). The prefrontal cortex and amygdala are therefore important structures in the context of emotion regulation.

Studies have implicated the prefrontal cortex with specific emotion regulation pathways including rewards processing, bodily signals, top-down modulation, and social processing. The work of Rolls (1990, 1996, 2000) provides important insights into this reward processing role of the prefrontal cortex. Roll's works suggests that the prefrontal cortex in concert with the amygdala function to learn and represent the relationships between new stimuli (known as secondary reinforcers) and primary reinforces such as food or drink. Central to Roll's suggestions are that neuronal connections in the prefrontal cortex can detect variations in the reward value of learned stimuli and accordingly alter their response. The hypothesis underlying the role of the prefrontal cortex and bodily signals is the somatic marker hypothesis which builds on the James-Lange (1885) theory of emotions. The somatic marker hypothesis proposes that certain regions of the prefrontal cortex (in particular the ventromedial regions) processes emotional bodily feedback which guides decision-making in complex and uncertain human situations (Damasio, 1996). The suggested mechanism is that somatic markers which are physiological reactions provide signals for delineating which existing events have been previously associated with emotion-related consequences thereby enabling the individual to work through situations of uncertainty when required to, based only on the emotional properties of the existing range of stimuli. With regards to top-

down and bottom-up modulation of emotions, the prefrontal cortex has increasingly been recognised as vital and associations have been made between this area of the corticolimbic system with automatically or effortful intent to regulate emotional experience or expression (Gross & Levenson, 1997; Nunn , Frampton, Gordon & Lusk, 2008). At the neural level, studies have found that prefrontal areas together with the orbitofrontal cortex and anterior cingulate cortex are more commonly involved in emotion regulation with results generally favouring cognitive rather than attentional control (Ochsner & Gross, 2005). Activation of these same areas have also been shown to be associated with deactivation in other areas of the limbic system such as at the amygdala resulting in successful emotional down-regulation (Ochsner, Bunge, Gross, & Gabrieli, 2002). With regards to social processing in emotion regulation pathways, the medial prefrontal cortex has increasingly become an important focus of research, with a recent study implicating this part of the brain in mentalising during emotion processing and also outcome monitoring, both of which are important in emotion regulation (Amodio & Frith, 2006; Frith & Frith, 2006).

3.5 Measuring emotions

Despite a plethora of theories offering differing perspectives on what emotions are, there is no generally accepted consensus on the precise nature emotions. Consequently, there is no gold standard method for measuring emotions. Methods for measurement of emotions in the workplace therefore vary depending on which dimension of emotion a researcher wishes to measure, and the definition of emotion adopted by a researcher. If a researcher wished for example to adopt the process model definition of emotion (Scherer, 1987), it could be argued that only convergent measurements of all component changes within the process model can yield a complete assessment of that emotion. An illustration might be a doctor or a nurse who experiences a distressing emotional encounter (i.e. stimulus event) in a clinic or a hospital ward. He or she will initially evaluate the stimulus event for relevance and appraise it for its coping potential (*cognitive component).*

An internal systems regulation for bodily symptoms follows (*neurophysiological component*), followed by preparation and direction of specific action tendencies (*motivational component*), then communication of an intention and reaction (*expressive component)* and finally reflecting and monitoring the emotional experience *(the subjective feeling component)*. Practically however, adopting this approach is likely to be an arduous undertaking and therefore the ability of the researcher to clearly define a specific component of emotion they wish to measure such as valence, reappraisal or arousal within the context of the much wider definition of emotions can be helpful in bringing a degree of specificity to the measurement process (Ashkanasy & Dorris, 2017). The use of other objective investigative techniques traditionally adopted by the neuroscience disciplines e.g. cognitive-experimental approaches can also be tremendously helpful in investigating intrapersonal aspects of emotion regulation (MacLeod & Bucks, 2011). Notwithstanding this, more difficult questions yet arise where a researcher wishes to measure less well-defined constructs such as feelings. Feelings have been described as subjective phenomena often representing cognitive processes that reflect complex mixtures of mental and physical processes (Scherer, 2005). Scherer (2005) suggests that these processes usually follow confrontation with some event, either internal or external. Frequently however, the only realistic method of capturing qualitative experiences associated with such emotional constructs is by using self-reporting measures but these are not without methodological difficulties. Scherer (2005) suggests that researchers frequently provide fixed-response alternatives when using self-reporting measures to ensure proficiency and standardization of the data collection process. These measures may however have unintended effects, the most significant perhaps being the issue of "priming" individuals by signifying responses which they may hitherto might not have considered. The opposite can also occur where an individual's preferred response may not be available in the fixed-response alternatives provided and consequently being forced to approximate their responses to the nearest alternative resulting in loss of data specificity. Self-reporting measures can also suffer from other methodological problems such as common method variance, but this can generally be overcome by limiting the number of emotions measured at a particular time (Podsakoff, MacKenzie, & Podsakoff, 2012). Random measurement error

and variability in emotions over time can similarly pose methodological challenges for researchers. Larson & Csikszentmihalyi (2014) have suggested the use of Experience Sampling Methods or Diary Methods to help account for variability in emotions over time. These methods ensure that emotions are recorded in real time while random measurement error can be prevented by avoiding the use of single item measures (Cunny & Perri, 1991).

The use of non-self-reporting methods such as electroencephalography (EEG), quantitative electroencephalography (qEEG) and functional magnetic resonance imaging (fMRI) are increasingly being used as means of attaining more objective measurements of emotion. Their used have been predicated on behavioural theories which suggest broadly that emotions are conditioned responses triggered by stimuli with responses observed in others. Examples include studies by Brenner, Rumak, Burns, & Kieffaber (2014) that evaluated the role of theta brain waves in emotion memory tasks using EEG, and also Hallam et al.'s (2014) work which used fMRI methods to investigate the neurological basis of interpersonal emotion regulation. These methods clearly have the advantage of maintaining researcher objectivity but can have disadvantages in terms of cost of equipment, which may be prohibitive to most researchers, particularly those located in less well-funded large research centres. Overall however the multi-dimensional nature of emotions means that issues of reliability and validity during measurement will probably be best achieved through use of multiple measurement tools encompassing cognitive, physiological and subjective aspects of the emotion experience (Dasborough, Sinclair, Russell-Bennett, & Tombs, 2008).

3.6 Emotions in organisations

Despite significant progress over the last three decades in studying emotions from various epistemological perspectives e.g. cognitive, social, and philosophical, there remains a degree of uncertainty in respect of the structure of the human affective experience within organisations. Few

models have been described to illustrate the role emotions in organisations except perhaps for a five-level paradigm representing connected relationships between emotions and organisational behaviour (Ashkanasy, 2003). At the base of this paradigm is Level 1, also known as the within-person variability level. Level 1 covers momentary temporal variations in emotions and behaviour as they are experienced by individuals in organisations. Ashkanasy & Humphrey (2011) have suggested that level 1 is best understood in terms of the Affective Events Theory which has provided significant impetus to the study of emotions in the workplace since its publication in 1996. The theory postulates that employees respond to discrete 'affective events' within the work environment and this in turn produces affective responses influences attitudes and behaviour outcomes (Weiss & Cropanzano 1996).

Level 2 of the model refers to between-person variability i.e. individual differences such as in trait affectivity (Watson & Tellegen, 1985), emotional intelligence (Mayer & Salovey, 1997), commitment to organisations (Meyer & Allen, 1997), and job satisfaction. All of these factors are evaluated as between-person attitudinal variables (Fisher, 2000). By far, emotional intelligence is arguably the foremost and most studied variable. That may partly be because it has long been argued that individuals with higher emotional intelligence are more likely to manage emotional events better compared with those with those with lower emotional intelligence. Within the milieu of organisations it has been suggested that employees with higher emotional intelligence are more likely to contribute positively compared with those with lower emotional intelligence (Ashkanasy & Ashton-James, 2006). At Level 3, the focus is on how emotions are perceived and communicated. This includes voice and facial recognition of emotions within the context of dyadic interactions between individuals in organisations (Ekman, 1999).

Level 3 also includes emotional labour which Hochschild (1983) has described as the expression of emotion by an individual during their work. It is characterised by surface acting which denotes outward displays of emotions not matching what the individual truly feels, and deep acting denoting genuine

display of emotions where the individual attempts to experience and display emotions to align with organisational expectations.

Level 4 of the model focuses on group phenomenon. This relates specifically to teams and leadership. Leadership at this level is theorized as a social process which significantly impacts on moods and feelings of group or team members. The two main areas of study at this level have been the role of leaders as 'mood managers' and the relationship between emotional intelligence and leadership. Also vital at this level is the role of emotional contagion (Hatfield et al., 1992). On the role of leaders as 'mood managers', arguments have been propounded that the management of moods of group or team members should be regarded as a major rather than a minor leadership function (Humphrey, 2002). Evidence in this direction indicates that leaders who enjoyed a better understanding of how to respond to emotionally arousing events within the workplace were able to influence others through role-modelling an appropriate emotional response and thereby contributing to not only stronger team unity but also cohesion (Pescosolido, 2002). Regarding emotional intelligence competencies and leadership a plethora of studies over recent decades have either fully or partially supported a relationship between the two variables e.g. (Walter, Cole, & Humphrey, 2011). In relation to the role of emotional contagion, it is important to note that within groups and teams, a primary mechanism of dispersing an emotional states is thought to be via emotional contagion (Hatfield et al., 1992). With emotional contagion it is posited that group or team members "catch" emotional states of others and begin to mimic those emotional states themselves.

Finally, level 5 focuses on the organisation in its entirety. At that level, the paradigm posits adopting an organisational wide approach, with the principal aim being the facilitation of a healthy emotional climate (Ashkanasy, Härtel, & Daus, 2002). Emotional climate in this context refers to a subset of the broader concept of organisational climate focusing specifically on the collective team mood towards their roles, colleagues and management at the organisation (Schneider, Ehrhart, & Macey, 2011). As a construct, emotional climate differs from organisational culture in that it is often less stable than culture and it is

not usually associated with deeply held beliefs and value systems by team members (Schein, 2010). Level 5 therefore differs from other individual levels in this paradigm because it incorporates organisational policies, processes, and values from the lower levels. Accordingly level five presents important challenges to managers because it requires a good understanding of how accrual of affective events in levels 1 to 4 drives employees attitudes and behaviours (Ashkanasy & Ashton-James, 2006). In respect of this study, Levels 1 and 2 are most relevant and vital because they provide an understanding of momentary temporal variations in emotions and behaviours as experienced by individual members of staff (at Level 1) and between-person variability i.e. emotional intelligence (at Level 2). These ultimately contribute either positively (via compassion satisfaction) or negatively (via compassion fatigue) to the organisational milieu (Level 5).

3.7 Emotion regulation

Researchers have generally considered emotion regulation as a whole bodily reaction to signify relevant personal events (Frijda, 1986; Levenson, 1999). From that perspective Gross & Thompson (2007) and Pena-Sarrionandia, Mikolajczak, & Gross (2015) have described emotion regulation to include goal directed processes which function to influence the intensity, duration and type (quality) of emotion experienced. This description suggests that the regulation of emotions requires flexibility often in accordance with an individual's immediate as well as longer-term goals. It is important to state that differentiating emotion regulation from the construct of emotion is a difficult one. A prime reason for this has been the historical lack of a clear and unifying consensus on the definition on what emotion is (Campos, Mumme, Kermoian, & Campos, 1994). Besides, because emotions can be construed as exerting a regulatory effect on physiological bodily systems that are closely related to emotion regulation such as the cardiovascular (Porges, Doussard-Roosevelt, & Maiti 1994), and the neuroendocrine systems (Stansbury & Gunnar 1994), it is argued that emotion regulation affects and is affected by these very physiological systems and clear distinctions are difficult to make (Dodge & Garber, 1991). To add to the complex conceptual definitional issues, it is important to explain that the term emotion regulation is

not only exclusively applied when emotion processes are believed to influence other processes, but it is also applied when there is a requirement to communicate that emotions have the ability to be regulated; for example why would one individual seek succour in a friend when distressed while another turns to alcohol or other psychoactive substances (Cole, Martin, & Dennis, 2004). Additionally, is the thorny issue of whether emotion regulation should pertain only to optimal functioning or whether it should also apply to maladaptive functioning. Debate within this area continues with some investigators opting to restrict the use of the term to optimum functioning, although in do so they risk confounding the construct with positive and optimal psychological health only and consequently overlooking the regulatory features of emotion in those with emotional dysfunction or those at risk of emotional dysfunction (Dodge & Garber, 1991; Keenan, 2000). Another issue with conceptualisation issue vital to emotion regulation relates to its appreciation by researchers within particular contexts. Cole et al. (2004) illustrates this by questioning how for example an accurate determination can be made that the appearance of joy in a preschool boy's interaction with his mother is that of genuine interpersonal harmony or whether that demeanour in another context can be interpreted as an effort by the child to regulate his anger with his mother by masking it. The importance of this analogy is that not all signs of joy can be interpreted identically, despite the fact that all joys may serve to maintain a desired goal (Barrett & Campos, 1987). Notwithstanding the conceptualisation issues highlighted above the classification of emotion regulation strategies adopted by humans during emotion management poses similar scientific challenges.

Common empirical methods used in facilitating classification have included exploratory factor analysis (Thayer, Newman, & McClain, 1994), rational sorting (Parkinson & Totterdell, 1999), a combined top-down (theoretical) and bottom-up (empirical) approach (Skinner, Edge, Altman, & Sherwood, 2003) and a process model (Gross 1998a). Exploratory factor analysis while useful has suffered with difficulties of interpretability and comprehensiveness of the derived categories. For example within the coping domain repeated multiple factors analysis on the same items have failed to produce replicable

structures in coping strategies (Skinner et al., 2003). Similarly, rational sorting (which involves aggregating items that share common characteristics) has suffered with comprehensiveness issues and failed to help converge set of common categories in coping domains. The combined classification method (where a researcher first defines higher-order categories of emotion regulation strategies), and then uses an empirical approach such as confirmatory factor analysis to test the fit of specific emotion regulation strategies into the higher-order groupings provides a slightly more comprehensive approach although unfortunately this approach is not widely adopted in the literature.

A much more widely used and evaluated approach is Gross's (1998a) process model of emotion regulation which is detailed in next section. This classification system for emotion regulatory processes proposes that emotion regulation strategies may be classified according to the time at which they intervene in the emotion generation process. The model also assumes that emotion responses are generated in a fixed cycle such that attention to emotionally relevant stimulus precedes cognitive reappraisal, which in turn precedes emotionally expressive behaviour. Gross's (1998a) process model irrespective of the timing considerations draws attention to relevant targets of emotion regulation. Among the three most widely investigated emotion generating systems targeted for regulation are attention, cognitive emotion-relevant knowledge and bodily manifestations of emotion (Gross 1998a, 1998b; Parkinson & Totterdell 1999). Attention is important because it allows individuals to selectively choose inbound information relevant to a particular context for processing (Fan, McCandliss, Fossella, Flombaum, & Posner, 2005), while cognitive-relevant knowledge encompasses the individual's subjective cognitive evaluations and attributions either to the self or others of emotionally significant encounters (Lazarus, 1991; Smith & Lazarus, 1993). It is important to point out that because of the heterogenous nature of emotion regulation strategies, while some strategies such as mindfulness training and repressive coping may both target attention, the former involves purposeful attention paying to negative emotions without necessarily reappraising them, while the later avoids negative emotions

altogether. Bodily manifestations on the other hand include how emotions unfold, for example facial expressions, bodily postures, and voluntary / involuntary motor movements. In respect of that, it is essential to clarify that some emotion regulation strategies such as progressive muscle relaxation principally target bodily manifestations of emotion (Esch, Fricchione, & Stefano, 2003).

The process of emotion regulation is also frequently confused with another form of emotion processing known as emotional sensitivity and it is vital in this study that a clear distinction is made. This is because it is well established that humans can regulate their emotions rapidly and it can often be difficult to distinguish "where an emotion ends, and regulation begins" (Davidson, 1998, p. 308). As is often the case, an individual's primary response (i.e. primary appraisal) to an event can qualitatively differ from their secondary appraisal (Lazarus, 1991). Therefore, the individual's primary appraisal most likely reflects their emotional sensitivity, whereas their secondary appraisal reflects emotion regulation. This crucial distinction is rooted in the conceptualization of emotion regulation as a control process, so that even though an individual's primary emotional response may not be regulated at primary appraisal stage, that step serves as a vital input for subsequent monitoring and control processes that constitute emotion regulation (Carver & Scheier, 1998).

It must be noted that all variables that influence exit gradients belong to the process of emotion regulation. Down-regulation processes aim to attain steeper gradients to ensure faster returns to baseline (Gross, 1998a), while up-regulating processes increase the magnitude of emotional responses (Schmeichel, Demaree, Robinson, & Pu, 2006). Maintenance processes lead to flatter gradients thereby maintaining emotional responses over longer periods (Nolen-Hoeksema, 2000). Therefore, while the process of emotion regulation may influence aspects of emotion processing apart from the exit gradient (e.g. intensity of emotional responses) it is the impact on the exit gradient that distinguishes emotion regulation from other types of emotion processing including emotional sensitivity. It is also worth noting

that certain types of emotion regulation may occur proactively, for example when avoiding an upcoming undesirable event. In such situations emotion regulation subjectively heralds the onset of an emotion. Either way, the evidence suggests that anticipating an emotional experience results in partial simulation of that experience leading to activation of emotional responses of the body and brain. This means that emotional sensitivity is already at play during the anticipation and thus the distinction between emotional sensitivity and emotion regulation is always meaningful irrespective whether the individual regulates their emotion in the heat of the moment or proactively (i.e. before the event). Therefore, emotional sensitivity determines the onset of an emotional response while emotion regulation determines the offset. Gross, Sheppes & Urry (2011) have also described emotion regulation in terms of automaticity during the emotion generative process. Two types of automaticity have been identified (i) implicit or nonconscious automaticity, or (ii) explicit or effortfully regulation). While most research has focused on explicit emotion regulation, implicit regulation has more recently been argued to be just as important in its effect on emotion regulation (Bargh & Williams, 2007; Parkinson & Totterdell, 1999). Implicit regulation has been defined by Mauss, Bunge & Gross (2017, p. 148) as "goal driven changes to any aspect of one's emotions without making a conscious decision to do so, without paying attention to the process of regulating one's emotions, and without engaging in deliberate control". Implicit regulatory processes are frequently initiated by simple registration of sensory inputs, which in turn activate knowledge schemas that influence psychological functions.

Explicit regulatory processes are volitional, require attention and are driven by desires to accomplish explicit goals. It is argued for example that accomplishing so-called 'low-level' daily functions such as walking or running occurs implicitly, while that is not the case for so-called 'higher-level' functions such as individual self-regulation. Reasons suggested for this include the requirement for 'higher-level' functions to be wilful, explicit and employ conscious regulatory processing (Wegner, 2004). More recently however this notion has been challenged and it has been suggested that 'higher-level' functions

such as self-regulation are mentally represented in the same manner as other cognitive constructs and can therefore be implicitly regulated (Custers & Aarts, 2005; Glaser & Kihlstrom, 2005). Mauss et al., (2007) have propounded similar arguments and have proposed a process model based on Gross's (1998a) model. Their model suggests that implicit regulatory processes can involve changes at all levels of the emotion generative process including antecedent-focused (pre-stimulus) and response-focused stages (post-stimulus).

Similar to Mauss et al.'s, (2007) model is Sheppes, Suri & Gross's (2015) extended-process model of emotion regulation which is consistent with the notion of emotion regulatory flexibility (Bonanno & Burton, 2013). Sheppes et al.'s model (2015) model distinguishes three stages of emotion regulation; (i) identification (this involves a general decision whether or not emotion regulation will occur, (ii) selection (this involves a decision about which strategy to employ e.g. attention deployment or cognitive change, (iii) implementation (deciding which specific regulatory strategy selected to activate). These three emotion regulation stages are influenced by three interacting valuation systems that constitute three regulatory stages. Each stage of the regulatory process involves individual *Perception* (*P*) (i.e. of the state of the world; *Valuation* (*V) representing emotions* (i.e. as to whether it is positive or negative) and taking *Action (A)* (i.e. based on that valuation).

Other forms of emotion regulation paradigms in the wider literature and which were considered relevant to this PhD study include the regulatory paradigms of emotional contagion and cognitive fusion. In respect of emotional contagion it is important to explain that within groups and teams in organisations, a primary mechanism of dispersing an emotional state is via emotional contagion (Hatfield et al., 1992). This construct describes an automatic and unintentional tendency of one person to regulate their emotions by 'catching' or 'absorbing' another person's emotional experience (emotional contagion absorbed) while simultaneously 'infecting' others with their own emotions (emotional contagion

'infected') and thereby accomplish emotional congruence within social exchanges (Elaine Hatfield, Cacioppo, & Rapson, 1993). Current literature on the neural basis of emotional contagion suggests that it spreads within a few milliseconds and requires a similar amount of time for registration in the neocortex of the brain where conceptualisation occurs. It is this neural circuitry mechanism which allows the individual to become aware of emotional exchanges with others (LeDoux, 2003). Additionally this mirror neural circuitry system is reported to promote imitation and mimicry mechanisms by which the individual perceives the expression of other's emotions and return emotional signals that arouse emotions in others during social discourse (Iacoboni, 2009; Nummenmaa, Hirvonen, Parkkola, & Hietanen, 2008). Cognitive fusion on the other hand is a type of emotion regulation process that strengthens the automatic effects of verbal thought content on mental processes and behaviour (Hayes, Strosahl, & Wilson, 2011). In cognitive fusion the individual becomes entangled in their thinking, evaluations, memories, and judgements and often displays behaviours derived from functions of those personal/private experiences (Gillanders et al., 2014; Ruiz, Suárez-Falcón, Riano-Hernández, & Gillanders, 2017). It is argued that cognitive fusion chiefly reflects reactivity to content of thoughts or the strengthening effects of contents of thoughts on other mental processes such as emotion, attention, motivation, or cognitive elaboration (Bernstein et al., 2015). This process of reactivity to content of thoughts is argued to be similar to mental processes elicited by actual events of verbal representation such as when an individual responds to a thought like "others hate me", in a manner identical to an actual group of persons acting maliciously towards the individual (Plonsker, Gavish Biran, Zvielli, & Bernstein, 2017). Cognitive fusion can therefore result in less adaptive responses to external and internal emotionally distressing and evocative events. This can result in less emotion differentiation (that is the capacity to distinguish clearly between different categories of emotion states such as anger, fear, disgust etc). Less emotion differentiation can impact on the degree to which an elicited emotional state such as anger or fear triggers a broader circuit of negatively valenced emotions and associated negative outcomes (Barrett, Gross, Christensen, & Benvenuto, 2001).

Cognitive fusion is also a central tenet of Acceptance and Commitment Therapy Model - ACT (a form of cognitive behavioural therapy). It emphasises the distancing of thoughts rather than changing thought content as its main feature. The model briefly outlines six overlapping processes of willingness, diffusion, contact with the present moment, clarity of values, committed action, and a flexible range of perspective-taking skills (Hayes, Strosahl, & Wilson, 1999). It is argued that all of these processes when applied leads to psychological flexibility. Within the ACT model, distancing from thoughts is referred to as 'cognitive diffusion' while the opposite process is called 'cognitive fusion'. It is believed that during the process of fusion personal experiences become aversive and 'fusion' between thoughts and behaviours occur resulting in experiential avoidance strategies such as emotional suppression, mental rumination, and distraction. These cognitive avoidance strategies overtime become negatively reinforced and if the 'fused' individual continues employing experiential avoidance strategies in response to aversive personal experiences, a cycle of entrapment in these experiential avoidance loops results and the individual becomes less sensitive to their direct consequences (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). For example, and individual with generalised anxiety has a thought pattern dominated by self-focused attention and negative evaluations of him/herself going into this workplace. As a result of this cognitive thought pattern he/she develops a strong tendency to regulate overt behaviours such as entering social situations. In that context of 'fusion' he/she takes their thoughts literally rather than seeing these negative self-evaluation mental events as likely to entrap them in experiential avoidance loops until a process of 'diffusion' via the ACT model occurs. It is important to explain that the process of 'fusion' is on a continuum from 'fused' (completely entangled thoughts and behaviours), to 'defused' (which is experienced as mental events but not necessarily requiring to be acted upon). The process of 'diffusion therapy' aims to 'unhook' thoughts from actions thereby creating psychological distance between the individual and their thoughts, beliefs, and memories.

Given the importance of cognitive fusion in these emotion regulation processes, self-report measures have been developed and validated to evaluate the construct. The two most commonly used measures are the Believability of Anxious Feelings and Thoughts (BAFT) scale (Herzberg et al., 2012), and the Cognitive Fusion Questionnaire (CFQ; Gillanders et al., 2014). The BAFT is contextualised to anxiety, while the CFQ is a general measure applicable to diverse situations and therefore adopted in this study to measure cognitive fusion. Fusion within the CFQ is defined as "the tendency for behaviour to be overly regulated and influenced by cognition (Gillanders et al., 2014, p. 84).

From the perspective of other academic disciplines, it is worth noting that the neurosciences and cognitive psychology have for example historically investigated emotion regulation as an intrapersonal process (Dillon, Deveney, & Pizzagalli, 2011; MacLeod & Bucks, 2011), while other disciplines like sociology or developmental psychology have tended to investigate emotion regulation from an interpersonal (relational) perspective (Barbalet, 2011; Campos, Walle, Dahl, & Main, 2011). While MacLeod and Buck (2011) have for example focused on the associations between cognition and emotion and emphasised the salience of cognition in emotion regulation and dysfunction, Barbalet (2011) has described emotions as a social construct where emotion is defined as an experience of involvement when an individual interacts with their social world. Barbalet's (2011) perspective therefore views emotion regulation as an individual's involvement when they interact with their environment and such regulation can occur in any person who is involved in an interaction. Therefore, emotion regulation from this perspective does not exist in the individual but rather within social interactions. Kappas (2011) on the other hand reasons differently. He argues that while emotion regulation is influenced by social processes, it occurs within the individual and can in turn be influenced by the individual's social environment. This perspective suggests that an individual's emotion is therefore influenced by the emotions of others and therefore others can act as conduits in emotion regulation. Ultimately, the process of emotion regulation does result either in emotional responses which are lessened in severity or duration (thereby reducing deleterious or negative outcomes or augmenting such outcomes. Overall therefore, there is some consensus that deficits in the process of emotion regulation or indeed emotion dysregulation can be

associated with difficulties in interpersonal relationships (Eisenberg, Fabes, Guthrie, & Reiser, 2000; Eisenberg et al., 1995; Garner, 1996), while appropriate emotion regulation has been associated with better social and emotional functioning (Eisenberg et al., 2000; Eisenberg et al., 1996).

3.7.1 Gross's Process Model of Emotion Regulation

Gross (1998a) has distinguished between two main emotion regulation strategies. These were based on whether the strategy influences emotions at the input phase (antecedent-focused) or output phase (response-focused). Integral to this model is the notion that emotion regulation strategies may be classified according to the time at which they intervene in the emotion generation process. The model also assumes that emotion responses are generated in a fixed cycle such that attention to an emotionally relevant stimulus precedes its reappraisal which in turn precedes an emotional response. The model also seeks to communicate a multi-faceted means by which emotions are regulated and provides a framework for classifying emotion regulation strategies irrespective of their adaptive or maladaptive nature along a timeline of an unfolding emotional response. In the Process Model (figure 2) , emotions may be regulated at five points during the emotion generation process; (i) during situation selection (for example whether

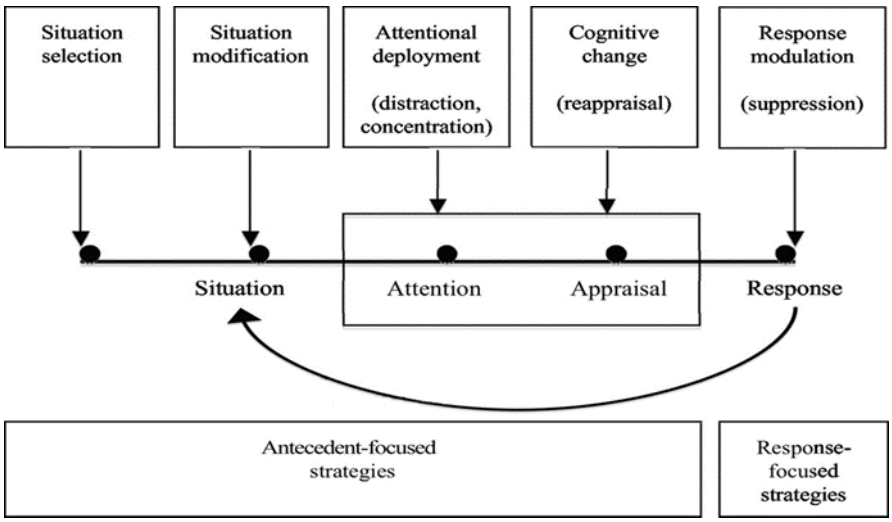


Figure 2. The process model of emotion regulation (Gross & Thompson 2007), with permission from the author.

to approach or avoid certain situations), (ii) during situation modification (that is how to tailor a situation to alter its emotional impact), (iii) during attention deployment (involves applying distraction or concentration techniques), (iv) during appraisal (for example using cognitive change), and (v) during response modulation (e.g. applying emotional suppression, intensifying or faking emotions). The first four elements of this process are antecedent-focused, i.e. they occur before emotional responses are fully generated, while the last element is response-focused i.e. they occur after emotional responses have been fully generated. In situation selection, the individual can preference situations to select and participate in, in pursuit of emotion regulation. In situation modification, they may tailor a situation to alter its emotional impact, while during attention deployment they select aspects of the situation to focus on or to be distracted by. Appraisal (cognitive change) involves the individual choosing which of many connotations or meanings they will attach to the aspect of the situation previously selected. Response modulation on the other hand refers to how response tendencies including physiological and experiential effects of negative emotions are influenced once they have been fully elicited.

Cognitive reappraisal and expressive (emotional) suppression are two of the most researched antecedent and response-focused strategies, and therefore were the focus of investigation in this study. Gross (1998a, 2002) explained cognitive reappraisal as a process of changing the manner a situation is construed by an individual to decrease its emotional impact on them. This contrasts with emotional suppression which consists of inhibiting the outward signs of the inner feelings of the individual to an emotion-eliciting event. Cognitive reappraisal acts early in the emotion-generative process and in several experimental studies it has been shown to decrease both negative emotional experiences and behavioural expression without increasing physiological (bodily) activation (Gross & Levenson, 1993; Gross, 2002; Brans, Koval, Verduyn, Lim, & Kuppens 2013). Emotional suppression on the other hand acts much later in the emotion-generative process and while similarly decreasing behavioural expression, it fails to alter negative emotional experiences while increasing physiological activation (Gross & Levenson,

1993; Brans et al., 2013). Other positive attributes of cognitive reappraisal reported in experimental studies include unaltered behavioural memory performance, while emotional suppression has been found to be associated with impaired memory performance (Richards & Gross, 1999, 2000; Sheppes & Meiran, 2007, 2008). The significance impaired memory performance from emotional suppression is in social functioning where the compromised individual may fail to imbibe information required to make appropriate social responses when engaging with others. In other empirical studies cognitive reappraisal has also been found to be associated with higher levels of positive emotions, better wellbeing and interpersonal functioning, while emotional suppression has been associated with lesser positive yet greater negative emotions and lower interpersonal functioning and wellbeing (Gross & John 2003).

Gross's process model is not without criticism. Firstly, studies have found in relation to the assumption that emotion responses are generated in a fixed cycle that the order in which emotion responses occur can vary. For example, attention and cognitive appraisal components can occur randomly either early or later in the emotion generation cycle (Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005; Strack, Martin, & Stepper, 1988). Another study reported that because of the variable nature in which emotion responses are produced, attending to an emotional stimulus generates emotional behaviour without necessarily involving any intervening appraisal (Neumann, Förster, & Strack, 2003). This finding suggests therefore the order of the emotion-generation process is no basis for systematically relating emotion regulation strategies to different classes of emotion responses. Other criticism levelled at the model include processes existing on a continuum i.e. from implicit to explicit with difficulty in deciphering the threshold at which regulation becomes explicit between different individuals (Bonanno & Burton, 2013). Bonanno & Burton (2013) have also observed that while the focus of Gross's process model is on successful application of defined emotion regulation strategies, adaptive emotion regulation in fact encompasses a broader range of skills and often flexible selection strategies are required. Another criticism of the Gross's Model to emotion generation and regulation is that the process focuses primarily on the individual and their cognitive relationship to a situation (Burkitt's 2018). Burkitt (2018) argues

that adopting this approach completely downplays the relational facet of emotions, whereby another person acts to regulate our emotions through interactions with them. Additional limitations which Gross (1998a) has personally identified relating to his process model includes firstly that situations, aspects and meanings when referred to within his model can be difficult to define. Secondly, he acknowledges that response tendencies within his model can be controlled in other subtle ways than merely increasing or decreasing them. Thirdly he acknowledges that similarities may not always exist in how control is exerted across the various response domains in the process model, for example, it may be easier to control emotion-expressive behaviour than the emotion experience itself. Fourth is that the model requires the individual to exercise a degree of cognisance of external situations by which he implies an awareness of 'internal and imagined situations' so that strategies such as attentional deployment for example can be effectively applied. Fifth is the acknowledgement that emotion regulation can occur simultaneously at multiple points in the emotion generative process and therefore regulatory processes can occur dynamically and not necessarily in a sequential fashion as the fixed cycle has proposed.

3.8 Emotional intelligence

Emotion-related individual differences exist in the way we perceive, experience, and manage our emotions and the emotions of others. Emotional intelligence, also often sometimes referred to as emotional competence or emotional skills is believed to help account for the individual differences in how humans experience and manage their emotions and the emotions of others (Petrides & Furnham, 2003). Emotional intelligence has been defined as "the capacity to reason about emotions, and of emotions to enhance thinking" (Mayer, Salovey, & Caruso, 2004 p. 197). It includes the ability to accurately perceive emotions, to access and generate emotions, to understand emotions, and to regulate emotions to promote emotional intellectual growth. From this definition it is discernible that the production of emotions in appropriate contexts is not the sole purpose of emotional intelligence, but also that emotional intelligence requires the application of complex intellectual skills to permit the individual to understand and interpret emotions within different contexts, and to analyse, process, manipulate and

evaluate them. For example, Mayer & Salovey's (1997) theory of emotional intelligence postulates emotional intelligence as a cognitive ability consisting of four basic abilities; (i) recognition of emotions (in the self and others); (ii) use of this information in cognitive decision making; (iii) understanding the effects of emotions and, (iv) using and managing emotions in behavioural decision making. Mayer & Salovey's (1997) theory explains that these abilities are organised from a basic to higher-order abilities that develop as the individual matures. Within the theory, perception of emotions describes the individual's ability to perceive, appraise and express emotion in themselves. This includes distinguishing honest and dishonest expressions of emotion, understanding complex emotional information and its application to relationships. Managing emotions also involves the individual's ability to manage other's emotions to facilitate intellectual and personal growth. The model therefore proposes that individuals with greater emotion regulation ability possess a wider range of strategies for maintenance of appropriate emotions and these abilities help them reduce/adapt undesirable emotions in themselves and in others. Thus, while individuals with higher emotional intelligence often understand the geneses and consequences of such emotions and can express their emotions in a socially desirable way in pursuit of specific external goals, those who are bereft or have lower emotional intelligence are easily overwhelmed by such emotions, often in negative way.

Within the literature, emotion-related individual differences have been conceptualised in three main models of emotional intelligence; (i) as abilities (Mayer & Salovey, 1997), (ii) as traits (Petrides & Furnham, 2000) or (iii) as a mixture of both (Bar-On, Tranel, Denburg, & Bechara, 2003). These models have led to different lines of research, with the abilities model presenting emotional intelligence as a set of interrelated abilities interfacing with emotion and cognition via four principal dimensions: (i) perception, (ii) understanding, (iii) using and (iv) managing emotions. The ability model measures emotional intelligence using problem-based knowledge and ability tests. A widely-researched and validated measure for these abilities is the Mayor-Salovey-Caruso Emotional Intelligence Test

(MSCEIT) (Salovey & Grewal, 2005). The measure has also been argued to provide certain distinct advantages most notably by offering a simple framework for mapping individual differences in emotional skills along the four dimensions of perception, understanding, using and managing emotions together with a distinguishing these dimensions from other domains of intelligence (Mayer, Roberts, & Barsade, 2008). Additionally, a plethora of studies have demonstrated that emotional intelligence affects individuals in many ways. For example, strong associations have been reported with work and academic performance (Van Rooy & Viswesvaran, 2004), positive correlates with subjective wellbeing (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002), negative correlates with stress and anxiety (Mikolajczak, Menil, & Luminet, 2007), lower levels of occupational stress and bullying (Hoel, Zapf, & Cooper, 2002). Life satisfaction (Gannon & Ranzijn, 2005), professional judgement and work performance (Sy, Tram, & O'Hara, 2006), low levels of absenteeism, and greater job involvement/commitment (Mignonac, Herrbach, & Gond, 2003) have also been associated with emotional intelligence. In a meta-analysis of 25 studies, ability emotional intelligence (which is believed to enhance aspects of work performance and adaptation) was strongly and positively associated with subjective wellbeing r =.32 (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). This association was found to be higher in studies using self-report mixed emotional intelligence instruments r = .38, than within studies using self-reports alone r = .32, and studies using performance-based emotional intelligence ability instruments r = .22. Sanchez-Alvarez et al., (2016) also reported a larger association between ability emotional intelligence and the cognitive component of subjective wellbeing r = .35 than with the affective component r = .29. Adaptive coping strategies such as positive re-interpretation of events which in turn are associated with positive emotional experiences and lower levels of burnout have also been linked with this model of emotional intelligence (Peña-Sarrionandia et al., 2015; Shin et al., 2014). Ability emotional intelligence has also been associated with enhanced interpersonal relationships (Mayer et al., 2008), and reduction in tendencies for aggressive behaviours (Peña-Sarrionandia et al., 2015). In contrast, the trait-based model whose origins lie in the study of emotions from a personality perspective concerns the individual's subjective perception of their

emotional abilities, that is how good they believe they are in respect of understanding, regulating and expressing emotions for adaptation to their environment and maintaining general health and wellbeing. According to the model, emotional intelligence is determined our understanding of our self-abilities thereby making it a construct of the subjective experience (Petrides, Pita, & Kokkinaki, 2007). Consequently, its assessment is mainly by self-reports and a well-known and validated questionnaire used in this area is the Trait Emotional Intelligence Questionnaire (Copper & Petrides, 2010). Trait emotional intelligence has been associated negatively with burnout and somatic complaints explaining up to 34% in the variance of burnout (Mikolajczak et al., 2007), It has also been associated with predictors job satisfaction and flourishing in work ($r = .12$) (Schutte & Loi, 2014), Additionally, relationships have been found between trait emotional intelligence and work engagement ($r = .41$) (Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015). There is also some evidence associating it and wider organisational variables like positively predicting entrepreneurial activity and achievement ($r = .52$) (Ahmetoglu, Leutner, & Chamorro-Premuzic, 2011). The mixed model on the other hand emphasises the understanding and management of one's own emotions and the emotions of others as well as encompassing a broader range of characteristics including perceived skills, personality traits and motivation, all of which contribute to emotionally intelligent behaviour (Petrides & Furnham, 2003). As demonstrated above the correlations and associated work outcomes reported for both the ability and trait-based models are not definitive for either model. However, in this study the ability-based model has been preferenced to the trait-based model partly because it predicated on evidence that emotional intelligence competences can be taught or learned (Kotsou, Nelis, Gregoire, & Mikolajczak, 2011, p. 827). The predication that emotional intelligence competences can be taught or learned is supported by studies reporting emotional intelligence to be an important factor explaining unique variances in different peoples adaptation and well-being (Gannon & Ranzijn, 2005; Van der Zee, Thijs, & Schakel, 2002). At the core of the construct is the notion of how individuals manage intrapersonal and interpersonal emotional information (Mikolajczak, Brasseur, & Fantini-Hauwel, 2014). From that core premise, it is proposed that individuals with higher levels of emotional competence can identify their

own emotions, others emotions, recognise the causes and consequences of those emotions and use/regulate them in a manner that is socially acceptable to a context, goal, thought or action (Mayer & Salovey. 1997). Also, the ability-based model delivers certain unique advantages as it provides a clear framework for charting individual differences in emotional skills within four main dimensions of perception, understanding, use and management of emotions (Mayer, Roberts, & Barsade, 2008). This contrasts with the trait-based model which mainly concerns the individual's subjective perception of their emotional abilities (Petrides, Pita, & Kokkinaki, 2007).

Mikolajczak and colleagues proposed an alternative integrative model of emotional intelligence comprising of three levels namely; knowledge, abilities, and traits which they believe can all be improved with training (Kotsou, Nelis, Gregoire, & Mikolajczak, 2011; Mikolajczak, 2009; Mikolajczak, Quoidbach, Kotsou, & Nelis, 2009). The *knowledge level* refers to what individuals recognise about emotions and emotional competencies that is to say; does the individual for example know how to express their emotions in a constructive manner ? The ability level represents the skill to apply such knowledge in a real emotional situation, that is, whether the individual can express their emotions in a constructive manner with a focus on what they can do, rather than their knowledge about what to do. An example could be even though many people know that acceptance of a situation can be an efficient strategy to reduce anxiety, many people are simply not able to observe and accept their emotions when they are anxious. The *trait level* refers to emotion-related dispositions; that is, the tendency for the individual to behave in certain way in emotion-related situations with the focus being whether the individual characteristically expresses their emotions in a constructive manner. The focus therefore is not on what individuals know or can do, but rather what they do consistently. This means that in relation to individual dispositions for example, some individuals may be able to practice acceptance in a role-play if explicitly asked to do so, while not applying this strategy in their life situations (Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013). While Mikolajczak et al., (2015) suggests

that these three domains of emotional competence are loosely connected, possession of one component may not always necessarily translate into the other. For example, the knowledge facet does not always necessarily translate into the ability facet, which in turn does not always necessarily translate into usual behaviour, although all of these aspects can be improved with training.

It is important to note that these three models of emotional intelligence are not without criticisms or limitations. An important criticism from the perspective of the workplace is that like traditional intelligence, the predictive validity of emotional intelligence is likely to vary depending on the context, criteria of interest and the specific theory used (Emmerling & Goleman, 2003). For example a meta-analysis which investigated the correlation and predictive validity of emotional intelligence compared with intelligent quotient (IQ) reported IQ to be a better predictor of work and academic performance than emotional intelligence (Van Rooy & Viswesvaran, 2004). Interestingly, it is known that individuals who performed well in a role or excel as a leader, IQ is a less influential predictor than emotional intelligence (Goleman, 1998; Goleman, Boyatzis, & McKee, 2013). Consequently while emotional intelligence may not be the sole predictor in work success, competencies such as cognitive, emotional and social abilities play a significant role in addition to traditional IQ in work success (Spencer & Spencer, 2008).

Another important limitation of these emotional intelligence models relates to the 'problem' of multiple theories. The concept of 'multiple theories' have been argued can create issues of validity because many studies approach the construct of emotional intelligence with different measures based on differing theories (Schutte et al., 1998). Additionally, it is evident from the wider literature that while all of the major theories on the subject are associated with the emotional intelligence paradigm, some experts have argued that closer examination of what they actually postulate shows some divergence in the precise language they use to label their theories and constructs (Golman, 2001). Zeidner, Roberts & Matthews (2008) have also commented on the differing theoretical constructs of emotional intelligence and have

pointed out the lack of clarity on some basic questions such as whether emotional intelligence alludes specifically to implicit or explicit knowledge of emotions or whether it relates to a basic competence, or perhaps whether it relates to particular cultural and social settings. It is some of these inconsistences and the lack of a single unifying definition of emotional intelligence that makes the construct a subject of ongoing discussion and research. What remains unclear and which this PhD study aims to investigate are which dimensions of emotional intelligence i.e. intrapersonal or interpersonal dimensions or both significantly influences the relationship between the emotion regulation strategies and compassion satisfaction and fatigue in doctors and nurses.

3.8.1 Chapter summary

This chapter has presented an overview of the empirical literature emotion, emotion regulation and emotional intelligence. The chapter articulates how emotions influence human thinking and behaviour, and how emotions have been historically difficult to define in society generally and within organisations. An analysis of the neurobiological basis of emotions was also presented and a distinction was also drawn between emotion regulation and emotional sensitivity. Gross's process model of emotion regulation was disused and how why it might inform a theoretical model in this study. A critical analysis of the construct of emotional intelligence was also given together with its role in work performance and work outcomes. In the next chapter, an overview of the theories of compassion satisfaction, compassion fatigue and stress will be presented. Attention will be paid to the inter-relationships between those theories and theories just discussed in this chapter for the purposes of generating a plausible theoretical model in chapter five, which will help fulfil the aims, objective, and research question in this study.

Chapter four: Theories of Compassion Satisfaction, Compassion Fatigue and Stress

4.1 Introduction

This chapter introduces theories of compassion satisfaction, compassion fatigue and stress. The chapter will also examine conceptual frameworks for creating compassion satisfaction and fatigue and explore how that relates with stress models. A detailed theoretical understanding of the three variables is necessary to generate essential knowledge required to inform the proposed model in chapter five for managing negative emotional experiences in the workplace and how that influences to compassion satisfaction and compassion fatigue.

4.2 The constructs of compassion satisfaction and compassion fatigue

An understanding of potential psychological factors within organisational settings impacting on doctors and nurses work is important for maintenance of a healthy, productive, and well-motivated workforce. The emotional impact of providing care, often within stress-laden and emotionally charged clinical environments is one such factor which has increasingly garnered researcher's attention within organisational settings (Neville & Cole, 2013). As a result, terminology such as compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress have emerged in the literature and they have been used to describe psychological conditions resulting from being exposed to highly emotional work such as in caring professions (Zander, Hutton, & King, 2010). The term 'professional quality of life' has also been used to describe the psychological constructs of compassion satisfaction and fatigue in relation to professional caregivers (Stamm, 2005). Thus it is essential that in this area of study that terms are clearly defined and operationalised before use (Ward-Griffin, St-Amant, & Brown, 2011).

4.3 Compassion satisfaction

It is argued that not all caregivers accede to the stresses of providing care to those traumatised or in suffering (Figley, 2013). The reason for this is thought to be that a caregiver's motivation to help others is shaped partly by the satisfaction they derive from caring. This is known as compassion satisfaction.

Compassion satisfaction therefore describes the positive psychological benefits such as pleasure, absorption, vigour, dynamism and satisfaction derived by caring professionals when they provide care to others in suffering (Conrad & Kellar-Guenther, 2006; Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; Stamm, 2005). Compassion satisfaction also encompasses the degree to which the caregiver finds meaning in their caring efforts and experiences positive collegiate support (Stamm, 2002). In respect of prevalence, the reported rates of compassion satisfaction in healthcare professionals varies widely between professional work areas and countries. In the UK for example, a study of therapists working with adult trauma patients reported a rate of 53% (Ekundayo et al., 2013), while in the United States, a paediatric critical care physician study reported rate of about 17% (Dasan, Gohil, Cornelius, & Taylor, 2015). In nurses, compassion satisfaction rates were reported in one study to be 57% (Sacco, Ciurzynski, Harvey, & Ingersoll, 2015). Despite these huge variations it has also been suggested that individuals with high compassion satisfaction frequently demonstrate not just a feeling of satisfaction, but also a feeling of revitalisation in their work and indeed towards wider society (Ekundayo, Sue, & Jo, 2013; Stamm, 2002; Stamm, 2010).

While compassion satisfaction has not been widely studied compared with compassion fatigue, available studies indicate that the construct may lie on a continuum rather than being a discrete entity. The reason for this may probably be because the construct is routinely challenged by the cumulative demands of experiencing and helping others through suffering (Figley, 2002). In a study of oncology social workers Simon, Pryce, Roff & Klemmack (2006) reported that compassion satisfaction can ameliorate the deleterious effects of compassion fatigue such as burnout and reduced work satisfaction. They also reported an inverse relationship between compassion satisfaction, compassion fatigue and burnout. In another study, Murray et al., (2009) found that nurses with high levels of compassion satisfaction did not appear be affected by compassion fatigue, burnout, or Secondary Traumatic Stress. Conrad & Kellar-Guenther (2006) reported similar findings showing that participants with high levels of compassion

satisfaction had lower levels of compassion fatigue and lower levels of burnout. They concluded that compassion satisfaction may help mitigate the effects of burnout. Burtson & Stichler (2010) investigated relationships among compassion satisfaction, nurse job satisfaction, stress, burnout and compassion fatigue in nurse carers, and reported significant associations between nurse caring and compassion satisfaction ($r = 0.51$, $p < 0.001$) with compassion satisfaction explaining 28.7% of the variance in nurse caring; ß = 0.536, $p < 0.001$. They concluded that fostering compassion satisfaction and social interaction opportunities among nurses might be beneficial as it may improve nurse caring and potentially sustain long-term improvements in patients. These studies clearly suggest some protective benefits of compassion satisfaction in relation to caregiver roles such as medicine and nurses.

4.4 Compassion fatigue

Compassion fatigue on the other hand has been described a state of exhaustive dysfunction experienced by caring professionals when they provide care over extended periods of time to person experiencing suffering (Figley, 2015). This psychological construct encompasses a state of deep emotional and physical exhaustion which the helping professional or caregiver experiences and it can result in a reduced capacity to provide care to those experiencing suffering (Figley, 2015; Mathieu, 2012). Figley (1995) has referred to the cumulative demands of caring as the "cost of caring", which can have negative consequences and like compassion fatigue. He elaborated on the construct and described a state of tension and preoccupation with traumatised patients that can result in symptoms such as (i) intrusive thoughts, feelings, and images, (ii) avoidant and/or numbing reactions, and a (iii) psychological state of hyperarousal (Figley, 2002a). He also described compassion fatigue as a secondary traumatic stress and a form of burnout (Figley 2002). More recent evidence suggests however that these terms are frequently used interchangeably but are in fact distinct from each other although not necessarily mutually exclusive (Neville & Cole, 2013; Nimmo & Huggard, 2013). Therefore, compassion fatigue may for example coexist with burnout (Ward-Griffin et al., 2011) and secondary traumatic stress (Nimmo & Huggard,

2013). The difference of course is that secondary traumatic stress is specific to individuals who treat predominantly traumatized populations whereas compassion fatigue often generalises to caregivers who work to provide care to a wide variety of other populations. Secondary trauma usually refers to the risk the caregiver incurs through empathetic engagement with a traumatised individual by having knowledge of the trauma and wanting to help (Zeidner et al., 2013). Like compassion satisfaction, prevalence rates of compassion fatigue vary significantly between work roles, areas, and countries. A recent systematic review reported prevalence rates of between 7.3% and 40% among intensive care nurses (van Mol, Kompanje, Benoit, Bakker, & Nijkamp, 2015), about 30% in professional carers including nurses (Bao & Taliaferro, 2015); and 54% in junior doctors - bearing an inverse relationship to age (Nimmo & Huggard, 2013). Generally, compassion fatigue has been found to be more prevalent in certain specialties thought to be at greater risk because they deal with greater degrees of trauma and death, e.g. critical care, oncology, and emergency care (Bao & Taliaferro, 2015). While compassion fatigue could take months or years to develop, it may also have an acute onset and a shorter recovery period compared with burnout.

Burnout on the other hand has been described as a psychological condition which presents with a state of physical, emotional and mental exhaustion often associated with diminution of the individual's ability to cope with the demands of the work environment as a result of cumulative or chronic work-related stress (Maslach, Schaufeli, & Leiter, 2001). It is usually characterised by three aspects; emotional exhaustion (described as the individual's loss of passion for their work), depersonalization (where the individual treats their patient as an object), and a lack of personal accomplishment (where the individual finds their work no longer meaningful) (Maslach, Jackson, & Leiter, 2006). While there may be some overlaps in symptoms between burnout and compassion fatigue, significant differences exist. While burnout can affect any worker irrespective of rank it commonly occurs in the context of low work satisfaction and cumulative stress over a period of time. The worker will commonly be previously

committed to their work but disengages over time in response to prolonged stresses from their work (Soler et al., 2008). The negative effects of compassion fatigue on the healthcare professional and patient care can be considerable. For example, the condition has been implicated the delivery of suboptimal patient care. This includes increased medical errors resulting from unchecked cognitive biases (West, Tan, Habermann, Sloan, & Shanafelt, 2009), breakdown in doctor-patient communication (Rifkin & Lazris, 2015), job dissatisfaction (Cross, 2016), breakdown in family dynamics (Bellolio et al., 2014), and common psychological problems such as feelings of alienation, helplessness, hopelessness, anxiety and depressive disorders (Maslach, Leiter, & Schaufeli, 2008). Wider systemic and organisational effects of compassion fatigue include higher rates of absenteeism (Williams et al., 2001), with resultant pressure on remaining staff who then are placed ironically at more increased risk of compassion fatigue. In summary therefore, compassion satisfaction and fatigue are important psychological factors that impact on the working lives of doctors and nurses. While the literature identifies personal and organisations consequences to low compassion satisfaction and high compassion fatigue, there are relatively few studies investigating the relationship between those variables, emotion regulation and emotional intelligence in healthcare environments, and specifically among doctors and nurses.

4.5 Conceptual frameworks for creating compassion satisfaction and fatigue

Conceptual frameworks in this study were grounded in Stamm (2010) and Radey & Figley's (2007) theoretical approaches for creating compassion satisfaction and compassion fatigue. In Stamm's (2010) approach, compassion satisfaction and compassion fatigue were posited as cumulative reactions of how an individual's work may positively or negatively affect them. Additionally, compassion satisfaction and fatigue are influenced by a combination of three factors; (i) the environment of individual being helped (described as the client environment), (ii) the work environment and (iii) the personal environment of the worker (described as the person environment). Therefore, while poor working environments for example may be a contributary factor in compassion fatigue, compassion fatigue may also paradoxically exist in parallel with compassion satisfaction perhaps because of the moderating

effect of compassion satisfaction on it. Stamm's (2010) theoretical approach is depicted in a Professional Quality of Life model (ProQoL) that evaluates organisational, personal, and helper-related aspects of the caregiver's work on their propensity to attain compassion satisfaction or compassion fatigue. The model sub-categorises caregivers professional's quality of life into compassion satisfaction and compassion fatigue, with further sub-categorisation of compassion fatigue into burnout and secondary traumatic stress.

Radey & Figley's (2007) theoretical approach on the other hand proposes that individual affect, work resources and self-care, in reciprocal relationships influences clinicians positivity–negativity ratio which in turn can create compassion satisfaction or fatigue. The origins of this theory is rooted in positive psychology, specifically in the work of Fredrickson (1998). Radey & Figley's (2007) approach provides a psychological perspective for comprehending the essential elements required in ensuring maximum positivity in the caregiver which in turn can maximise compassion satisfaction. Radey & Figley (2007) applied this concept to compassion satisfaction in clinical social workers and suggested that when influenced by discernment and judgement, an individual's affect, physical, intellectual, social and self-care resources will impact reciprocally on each other. They illustrated this by stating that when a caregiver demonstrates positive affect, it promotes individual psychological resources that in turn promotes positive affectivity. A similar relationship is observed when caregivers demonstrate self-care, which in turn influences and is influenced by both resources and affect. Pulled together, Radey & Figley's (2007) approach proposes a reciprocal relationship between affect, resources and self-care, all of which is suggested contributes to the clinicians' positivity–negativity ratio which will in turn creates compassion satisfaction and compassion fatigue.

Other theoretical approaches to creating compassion satisfaction or fatigue which were considered but not adopted in this study include (i) the Transactional Model of Physician Compassion (Fernando &

Consedine 2014) and (ii) the Conceptual Framework for Compassion Fatigue (Coetzee & Klopper, 2010). The Transactional Model of Physician Compassion is a dynamic model which suggests that the probability of a physician behaving compassionately is determined by dynamic interactions between the physician, the patient, their family, the clinical situation, and environmental/institutional factors. Physician factors include gender, personality, previous clinical experiences, and communication skills, and patient/family factors include personality, gratitude, compliance, and care expectations. Clinical factors include the degree to which a physician consciously or unconsciously attributes responsibility of the patient's condition to them or the complexity of clinical situations while considering environmental or institutional factors that relate to the demands of the physician's role and the degree of control he or she has in the workplace. Fernando & Consedine (2014) propose that it is the interplay of these factors that promote compassion in care or barriers that hinder it. While the model offers a useful framework within which to identify and organize factors to enhance physician compassion in clinical care, it fails to explain the consequences of providing compassion whether positively (as compassion satisfaction) or negatively (as compassion fatigue). The Conceptual Framework for Compassion Fatigue focuses on the progressive and cumulative nature of the genesis of compassion fatigue only (Coetzee & Klopper, 2010). It does not address compassion satisfaction. The risk factors identified in the Framework include prolonged, continuous, and intense patient contact, use of the self, and stress. In the process of creating compassion fatigue the model also describes an entry point variable known as compassion discomfort which progresses gradually to compassion stress and finally compassion fatigue. The model asserts that in order to cope with compassion stress, caregivers often distance themselves from those they care for, leading to a loss of therapeutic relationship between the parties. This ultimately results in compassion fatigue. Major limitations of this Framework include a lack of explanation for the aetiology for compassion fatigue, and how caregivers recover from or avoid compassion stress and indeed compassion fatigue.

4.6 Overview of Stress theories

An awareness of how individuals conceptualise stress is vital in understanding how they response, adapt, cope, and manage it. Traditionally, stress has been conceptualised in three broad categories namely:

1. ***Systems-based approaches*** in which stress is grounded in physiology. E.g. *stress explained as a response* (Selye, 1976) or *stress explained as a stimulus* (Holmes and Rahe 1967).
2. ***Stress as a transaction*** e.g. Lazarus & Folkman (1986) grounded in cognitive psychology.
3. ***Resource-based approaches*** e.g. Conservation of Resources Theory (Hobfoll, 1989) grounded in resource loss.

4.6.1 Systems-based approaches - Stress as a response

Stress has been defined as 'a state manifested by a syndrome which consists of all the non-specifically induced changes in a biologic system' (Selye, 1976, p. 64). Based on physiological animal experiments, Seyle (1976) characterised stress as a response to a stimulus and this was depicted in his General Adaptation Model of Stress. In that model stress was represented as a dependent variable which encompasses three basic concepts; (i) stress as a defence mechanism, (ii) stress following three stages of alarm, resistance, and exhaustion and (iii) and prolonged stress culminating in diseases of adaption or death of the organism. The alarm stage of the three-stage process of manifestation consists of an initial shock and countershock phase. In the shock phase the individual exhibits autonomic excitability which involves increases in adrenaline discharge and gastrointestinal alterations. In the countershock phase increases in adrenocortical activity is typical. Seyle (1976) argues that if the aversive stimulus (external stressor) continues resistance is seen and this represents the second stage in the General Adaptation Model. In that stage physiological manifestations observed in the alarm stage (first stage) will disappear perhaps because of the individuals adaption to the stimulus but as resistance increases in stage 2, resistance to other kinds of stressors simultaneously decreases. With stimulus persistence, resistance gives way to exhaustion and symptoms of the first (alarm stage) stage recurs. Crucially, resistance is no longer possible in the exhaustion phase and irreversible tissue damage then occurs. With stimulus

persistence death eventually occurs (Selye, 1993). Criticism of Seyle's model has primarily been directed at the theory's core central notion of nonspecific causative factors and a failure to distinguish triggers for specific stress reactions (Furnham, 2012). Mason (1972) observed that stressors identified by Selye as active were in fact all associated with a common emotional meaning i.e. that they were all new, strange, and unfamiliar to the organism. Consequently, the effect of this on the organism's overall internal state could be described as one of uncertainty. Mason (1975) demonstrated in experiments that when uncertainty was removed, the General Adaption Syndrome described by Seyle (1976) was not necessarily observed. Mason's observations undoubtedly led to new academic debate that stresses experienced by humans were probably mostly cognitive (Lazarus, 1974).

4.6.2 Systems-based approach - stress as a stimulus

The stimulus-based theory of stress emerged in the 1960s and it conceptualised stress through the lens of critical life events or changes that demanded response, adjustment, or adaptation. An influential example is the Holmes and Rahe's (1967) conceptualisation. Holmes and Rahe's (1967) authored a Social Readjustment Rating Scale (SRRS) consisting of 42 life events scored according to the estimated degree of adjustment they would each demand of the individual experiencing them e.g. marriage, divorce, relocation, etc. Holmes and Rahe's (1967) hypothesised stress to be an independent variable in the health-stress-coping paradigm, the cause of an experience rather than the experience itself. Their assumption was that critical life events irrespective of whether they are positive or negative trigger changes which generate internal challenges to the organism. While some associations were found between SRRS scores and illness, criticisms have nonetheless been levelled at the SRRS. In the main the criticisms have been because the theory makes certain assumptions (i) change is inherently stressful, (ii) life events demand the same levels of adjustment across the population and (iii) there is a common threshold of adjustment beyond which illness will result. The problem with these assumptions is that the theory assumes that humans are passive recipients of stress and they play no role in determining the degree, intensity, or valence of the stressor. While Holmes and Rahe (1967) have attempted to present

elements of interpretation into the theory by suggesting that changes or life events could be interpreted positively or negatively based on cognitive or emotional factors, the theory does not still explain the influence of other important variables such as prior learning, environment, support networks, personality, and life experience (Folkman & Nathan, 2011). Like Selye's theory the stimulus-based theory fails to take account of important mediators in stress-outcomes relationships such as coping mechanisms which are known to be central to psychological transactional theories.

4.6.3 Transaction-based approaches (Stress as a transaction)

Transactional models of stress argue that the manner in an individual interprets stressors determine how they respond emotionally, behaviourally and in respect of coping efforts. Many versions of transactional theories have been proposed, but the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), later revised to the Cognitive Motivational Relational Theory (Lazarus, 1991) has provided significant guidance in respect of stress-coping research. Lazarus & Folkman (1986) described psychological stress as an individual's relationship with the environment in which demands exceed available coping resources. Accordingly, this cognitive-relational theory of stress emphasises the continuous and reciprocal nature of the interaction between the individual and the environment. Since this theory was proposed, it has undergone further development with contemporary analyses positing a meta-theoretical concept of transaction (Lazarus, 1993; Lazarus & Folkman, 1987; Lazarus & Lazarus, 1991). The meta-theoretical system considers a multifaceted process of emotion comprising of causal antecedents, mediating processes, and effects. The antecedents represent persons and the environment (e.g. situational demands) while the mediating processes represent the individual's cognitive appraisals of the situational demands and individual coping options. These coping options may include problem-focused and emotion-focused strategies. Accordingly, the two central mediators within the person-environment transaction are cognitive reappraisal and coping (Lazarus & Folkman, 1986). The cognitive appraisal process comprises of two components: (i) primary, and (ii) secondary appraisals. Primary appraisals are believed to be represent the first stage of the essential influencing factor in human

emotional responses (Lazarus, 2001). Essentially, it describes assessments of goal relevance and whether a goal is congruent or incongruent for the individual. Goal relevance is important because it concerns the strength of an encounter, while goal congruence or incongruence concerns the perception of an encounter, i.e. whether the encounter is perceived as harmful or beneficial to the individual. Goal congruence or incongruence therefore influences how the individual's emotions are activated, be it for example pleasant or unpleasant. Secondary appraisals describe options available to the individual and prospects for coping with any perceived threats (Lazarus, 1991). Therefore, the concept of appraisal remains an important one in this stress theory because it represents an important variable in understanding stress-environment transactions. Appraisal is premised on the idea that emotional processes including stress are contingent on genuinely demonstrated expectations by individuals regarding the significance and outcome of a specific encounter (Lazarus & Launier, 1978). Consistent therefore with this stress theory is that a person's secondary appraisal of a potential psychological stressor/threat determines how they will respond, and that response may yield either positive benefits or negative outcomes.

While the Cognitive Motivational Relational Theory significant has strengths including giving weight to the individual's work situation, subjective perceptions, and the potential influence of individual differences, the complexity of the model means that it can be difficult to empirically evaluate. For example, Cooper et al., (2001) and Cox & Ferguson (1991) have reported that despite the extensive use of the term 'coping' derived from the model, significant difficulties remain in respect of its definition because of how it may be interpreted e.g. as a process or behaviour or indeed a trait. Notwithstanding these limitations, this theory represents the notion of secondary appraisal excellently and it is relevance for the purposes of this study.

4.6.4 Resource-based approaches - Conservation of Resources Theory

This theory argues that Lazarus's transactional model of stress focuses only on one dimension of the stress paradigm i.e. appraisal (Hobfoll 2001). In contrast, this theory proposes that resource loss is central to the stress process and it argues that resources act to preserve and protect further resources. Therefore, following stressful encounters individuals have a depleted resource pool to further combat stress. Resources in this context have been defined as "actual or potential means for achieving personal goals" (Freund & Riediger 2001, p. 373). Examples may include object resources such as a home, condition resources such as employment, or personal resources such as relationships, skills, and self-efficacy (Grandey & Cropanzano, 1999; Hobfoll, 2001). Hobfoll (2001) argues that while cognitive appraisal is one method of evaluating resource loss, most resource loss is observed and evaluated much more quantitatively.

Two central philosophies which underlie these resource assumptions are primacy of resource loss and resource investment. Primacy of resource loss argues that given equal amounts of loss and gain, loss will have significantly greater impact in health outcomes, emotional experience, and stress reactions. This suggests that those who lack resources or have fewer resources are more susceptible to further resource loss, and they are more likely to fall behind even further than those who begin with more resources (Freedy & Hobfoll, 1994). Thus in this model, possessing one resource is associated with possessing others and likewise lacking one resource is associated with lacking others (Hobfoll, 1998). Resource investment serves as a moderating factor to successfully adapting under stress and it does this by increasing the possibility of secondary gain thereby reducing the prevalence of acute and chronic resource loss. Where under-resourcing exists Hobfoll (1998) argues individuals become more defensive and the imperative then is to conserve resources and protect against further resource loss. Critics of this theory have however pointed to the rather nominal conceptual differences between it and the Lazarus's transactional theory. For example, while cognitive appraisal is central to Lazarus's theory, the stress process in that theory actually begins with objective antecedents (including resources) and culminates

with outcomes such as health and wellbeing (Schwarzer, 2001).

4.6.5 Chapter summary

This chapter has provided an overview of the theories of compassion satisfaction, compassion fatigue and stress. Frameworks for creating compassion satisfaction and fatigue were also discussed. Compassion satisfaction was explained as the positive aspects a caregiving which includes positive benefits like absorption, vigour, dynamism, satisfaction, and collegiate support. Similarly compassion fatigue was explained as a state of exhaustive dysfunction experienced by caring professionals after providing care to those in suffering. Stress theories were examined to help develop a clearer understanding of how individuals cope, respond, adapt, and manage stress. Knowledge and interrelationships generated from reviewing these theories will inform the proposed theoretical model discussed in the next chapter.

Chapter five: Methodology and Methods

5.1 Introduction

This chapter presents the methodology and methods. The chapter begins by outlining the research question, which is followed by an explanation of the epistemological and philosophical positions adopted in this study. Establishing a proposed model to address the research question is discussed, followed by details of the study methods. The methods will cover the study design used in this study including inclusion criteria, study setting and participants, power calculation, ethical issues, data collection procedures, questionnaire characteristics, and finally data analysis strategies.

5.2 Methodology and theoretical perspectives

5.2.1 Research question

Is there a relationship between cognitive reappraisal, emotional intelligence and compassion satisfaction and fatigue in doctors and nurses?

5.2.2 Epistemological and philosophical positions

The underlying epistemological stance in this study is positivism. Creswell (2013) suggests that positivism as an epistemological stance reflects a deterministic philosophy in which causes determine outcomes. Gray (2013) on the other hand regards the central precept of positivism as the existence of a social world that is external to an investigator and therefore permits the studying of its properties by direct observation. O'leary (2004) adds to this explanation by describing positivist epistemology as a doctrine which aims to test a theory or an experience through observation and measurement to predict and control forces that surround us. For proponents of positivist epistemology therefore, establishing scientific laws which govern the study of hard facts demonstrate the 'status of truth' and thus social and natural phenomena can be investigated using the same principles. With a background in medicine positivist arguments provide strong reasons to suggest that what the observer determines as reality is what they are expected to see, smell, taste, touch or appreciate with the aid of their senses. Additionally,

an investigator with a positivist stance should be able to study a subject or an entity on the basis of logical reasoning and empirical observation as opposed to mere philosophical speculation. Further arguments providing persuasion to this epistemological stance include the fact that positivists espouse that reality is stable and in that respect it can be investigated objectively without interference with the entity under study (Levin, 2008). Additionally, positivists argue that observations should be replicable often involving manipulation of reality in the form of a single independent variable, the purpose of which is to identify regularities or to make associations or relationships between entities (Crossan, 2003). This epistemological stance combined with concepts from positive psychology (Fredrickson, 1998; Peterson, Park, & Sweeney, 2008; Wong, Wong, McDonald & Klaassen, 2007) and salutogenic philosophy (Antonovsky, 1979) have influenced the theoretical framework described below - for this study. Positive psychology encompasses a scientific approach to investigating human behaviour which includes thoughts and feelings that focus on strengths and positive events rather than weakness and negative events. Positive human attributes such as optimism, compassion, life satisfaction, happiness and hope are also usually the focus of studies in positive psychology. Salutogenesis on the other hand is a philosophical approach that emphasizes the role of factors that support health and well-being rather than factors that cause disease. The approach therefore views the connection between health and illness as a continuum rather than a dichotomous relationship, and argues that experiencing a strong 'sense of coherence' (a central construct) helps the individual mobilise resources to cope with stressors and manage them successfully. This in turn predicts positive health outcomes (Antonovsky,1987; Antonovsky, 2006).

5.2.3 Establishing a model for managing negative emotional experiences in the workplace

Healthcare settings are demanding workplaces and as discussed in the previous chapter, stress theories such as Lazarus' Cognitive-relational Theory have emphasised the continuous and reciprocal nature of the interaction between the individual and their work environment. Of importance to this relationship are two central mediators of (i) cognitive appraisal and (ii) coping (Lazarus, 1991). The cognitive

appraisal process encompasses both primary and secondary appraisals and primary appraisal represents the essential influencing factor in assessing a stressor while secondary appraisals describes the options for coping with the perceived stressors. Consistent therefore with this theory is that a person's secondary appraisal of a potential emotional or psychological stressor determines how they will respond, and how the chosen response strategy may result either in positive benefits or negative outcomes to them. In appraising stressors within clinical settings, emotion regulation plays a vital role. Emotion regulation in turn permits the individual to control which emotions they experience; when they experience them and how they express those emotions. The process requires psychological effort which is proposed to occur via intrapersonal mechanisms (Muraven & Baumeister, 2000). In that regard, Gross's Process Model of Emotion regulation distinguishes two emotion regulation categories based on whether the strategy influence emotions at the input phase (antecedent-focused) or output phase (response-focused) (Gross, 1998a). Cognitive reappraisal which is an antecedent-focused emotion regulation strategy outlined in Gross's model describes a process of focusing an individual's thoughts on the positive aspects of a stressful experience aiming to minimise the negative emotional impact on the individual. It has also been associated with greater positive emotions and better individual and interpersonal functioning (Gross, 1998a). In contrast, expressive suppression which is a response-focused emotional regulation strategy involves inhibition of an individual's emotional response to stressful emotional situations. This strategy has been associated with greater negative emotions and an overall negative impact on the wellbeing and interpersonal functioning (Gross & John, 2003).

In addition to emotion regulation strategies, emotional intelligence emphasises individual differences in emotion regulation. Emotional intelligence therefore refers to the individual's ability to understand and regulate their emotions, regulate other people's emotions, and to use that understanding to guide their own thinking and actions (Mayer & Salovey, 1997). Emotional intelligence has been associated with improvements in compassion satisfaction and compassion fatigue in healthcare professionals (Zeidner

& Hadar, 2014; Zeidner et al., 2013) with reported correlations in excess of 0.30 between ability-emotional intelligence and tests of cognitive ability compared with correlations not usually exceeding 0.10 for trait-emotional intelligence and cognitive tests (Van Rooy, Viswesvaran, & Pluta, 2005). While ability models suggest that emotional intelligence can be increased through learning and training experience (Nooryan, Gasparyan, Sharif, Zoladl, 2011; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009), trait-based models suggest that emotional intelligence is determined by understanding of the individual's self-abilities thereby making it a construct of the subjective experience and not necessarily learning or training. In this study, the ability-based model has been preferred for investigating whether relationships exist between cognitive reappraisal, emotional intelligence, and compassion satisfaction and fatigue in doctors and nurses. To explore this possibility, this study conceptualised that the approach by which doctors and nurses appraise negative emotional experiences could result in either goal congruent benefits like compassion satisfaction or goal incongruent outcomes like compassion fatigue. In conceptualising negative emotional experiences in this manner, the role of cognitive reappraisal as an explanatory variable and emotional intelligence as a potential emotion enhancing resource (i.e. the mediator) was explored. Cognitive reappraisal and emotional intelligence were respectively selected as explanatory and mediator variables based on the matching principle (Cohen & Wills, 1985). That principle states that resources are deemed more likely to protect or benefit wellbeing if they come from the same qualitative dimensions as demands. Accordingly, the dimensions of resource could be physical, cognitive, or emotional, and the greater the congruence between the demands and the potential resource the stronger the protective/beneficial observed. Based on existing research literature and theories reviewed, the proposed model in figure 3 (page 84) postulates that goal congruent outcomes like compassion satisfaction could be achieved or goal incongruent outcomes like compassion fatigue ameliorated if an antecedent emotion regulation strategy (cognitive reappraisal) is used during secondary appraisal of negative emotional experiences within clinical settings, and that the relationship may mediated by emotional intelligence.

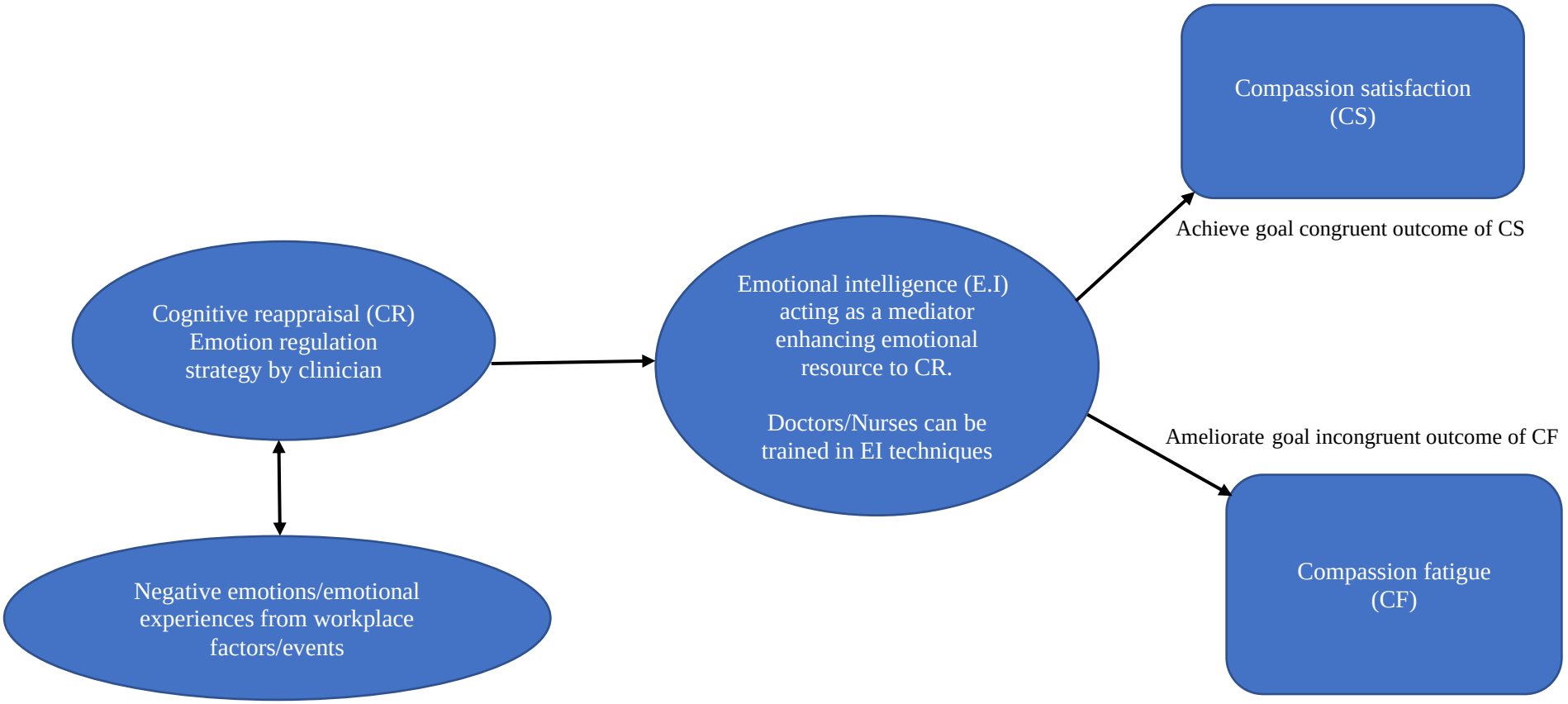


Figure 3. A proposed model for managing negative emotional experiences in the workplace and its potential influence on compassion satisfaction and compassion fatigue

5.3 Methods

5.3.1 Study Design

A quantitative approach was utilized in this study. Within this approach a cross-sectional correlational design will be employed. A correlational design allows for determination of the degree to which relationships exists between various variables under investigation. Six potential explanatory variables were investigated in this study namely, (i) cognitive reappraisal, (ii) expressive suppression, (iii) intrapersonal emotional intelligence, (iv) interpersonal emotional intelligence, (v) cognitive fusion, and (vi) susceptibility to emotional contagion. The dependent variables were compassion satisfaction and compassion fatigue. A major limitation of this type of design is that causation cannot be inferred, however findings from this study may be used as basis for future experimental studies (Gray, 2013).

5.3.2 Inclusion criteria

All doctors and nurses employed at a large NHS Hospital Trust in the UK.

5.3.3 Study Setting

The setting was a large UK NHS hospital.

5.3.4 Participant selection and sample size

With the assistance of computer-generated random allocation, participants were selected from an employee staff record. With an estimated response rate of 20%, 3540 doctors and nurses were required from a target population of 4377 doctors and nurses to achieve a study sample size population of 354. Average response rates for online surveys is estimated to be 24.8% (Fluid Surveys, 2014). Fowler's (2013) three step approach was used to estimate this number based on a margin of error of 5%, a confidence level of 95% and a response distribution of 50%.

5.3.5 Power analysis

The statistical software *G*Power* was used for the power analysis calculation (Faul, Erdfelder, Buchner, & Lang, 2009). The analysis was based on a multiple linear regression technique with a medium effect size $f^2 = 0.15$, α error probability = 0.05, a power level = 0.95 and six possible explanatory variables. A minimum of 146 participants were required to achieve adequate power in this study (see figure 4).

F tests - Linear multiple regression: Fixed model, R^2 increase

Analysis:	A priori: Compute required sample size	
Input:	Effect size f^2	= 0.15
α err prob	=	0.05
Power (1-β err prob)		= 0.95
Number of tested predictors		= 6
Total number of predictors		= 6
Output:	Noncentrality parameter λ	= 21.9000000
Critical F	=	2.1644088
Numerator df		= 6
Denominator df		= 139
Total sample size		= 146
Actual power		= 0.9507965

Figure 4. Regression power analysis calculation

5.3.6 Ethical issues

Diener & Crandall (1978) have enumerated four common ethical areas in which social researchers are frequently likely to make contraventions during the process of research. These areas include whether harm is likely to come to participants, whether there is lack of informed consent, whether there is invasion of privacy, and whether deception is involved. Types of harm which Diener & Crandall (1978) have suggested include physical harm, loss of self-esteem, stress, and inducing subjects to perform unacceptable activities. In this study ethical issues were addressed in various ways. Firstly, data was collected with consent and

anonymously. This ensured confidentiality and protection of participant's data. Practically this meant that questionnaires were not labelled, and personal identifying information not collected. Bryman (2015) has suggested that harm may come to research participants if confidentiality is breached and/or if consent is not sort. Anonymous data collected was also encrypted and entered directly onto a password protected computer network drive at Lancaster University. After completion of the study the anonymised database of participants information will be kept for 10 years before destruction by the researcher's academic supervisor.

As part of good ethical research practice in social science research, the Economic and Social Research Council's updated Framework for Research Ethics establishes six minimum key principles which must be adhered to for all ESRC funded research (ESRC, 2015). In this study, these six key principles were addressed by submitting an ethics application to the Lancaster University Research Ethics Committee which was approved. In addition, NHS Health Research Authority (HRA) approval was sought and obtained. NHS Research Ethics Committee Approval (NHS-REC) was not be required in this study because the study involved NHS staff who were recruited as research participants in their capacity as health care professionals (HRA, 2017). Legal and data protection requirements were met by ensuring that guidance relating to personal data processing of all identifiable living participants were in accordance with legislation existing Data Protection Act 1998 regulations. The researcher did not anticipate any conflicts of interest in this study. While no direct benefit to participations was anticipated it was expected that participants will find the experience of interest and the results help both participants and policymakers identify and tackle factors which affect compassion satisfaction and compassion fatigue in doctors and nurses. Additionally, while direct physical or psychological risks were not expected with participation in the study, the student anticipated the possibility that completing the questionnaires could generate emotions which participants

hitherto may not have felt by participants in relation to their work (Rodrigues et al., 2015). Participants who experienced distress after participation were encouraged to inform the Chief Investigator and contact a counsellor via the Hospital Trust's Employee Assistance Programme (known as Care First). Care first provide supportive counselling or alternatively contact their GP for support. There were no anticipated potential risks to the Chief Investigator, however, in the event of distressing issues arose from conducting the study the chief investigator planned to contact his academic supervisor for advice.

5.3.7 Data collection

Previously validated self-completion questionnaires were used in data collection. Questionnaires were administered over an 8-month period (28 March to 12 November 2017). Questionnaires were anonymous, web-based and distributed electronically using a Qualtrics survey software hosted by Lancaster University (see appendix 1 for questionnaire). An email was sent inviting participants to take part in the study. Participation was voluntary and consent was obtained when online self-completion questionnaires were completed. No personal identifying information was requested on the questionnaire or accompanying documents. This ensured confidentiality and anonymity. A cover letter informed the participant that withdrawal after questionnaire completion was not possible because questionnaires had been anonymised and data provided could not be individually traced. The cover sheet also informed participants that data collected was only made available to the research team and not be shared with other organizations. Questionnaires were used because most participants were familiar with them, they could be analysed quickly, and large numbers of participants could be reached at minimal expense. For the benefit of non-responders, reminder emails were sent four weeks after the initial email inviting participants to take part in the study.

5.3.8 The data collection questionnaire

Part 1 of the two-part data collection questionnaire covered selected demographic variables including occupation, gender, age, years since qualification, clinical speciality, years in current speciality and number of hours worked per week. Part 2 of the questionnaire consisted of five previously validated questionnaire scales namely; (i) the Susceptibility to Emotional Contagion Scale [5 questions] (Siebert, Siebert, & Taylor-McLaughlin, 2007), (ii) the Professional Quality of Life Scale [20 questions] (Stamm, 2010), (iii) the Emotion Regulation Questionnaire [10 questions] (Gross & John 2003), (iv) the Short Profile of Emotional Competence Questionnaire [20 questions] (Mikolajczak et al., 2014) and (v) The Cognitive Fusion Questionnaire [7 questions] (Gillanders et al., 2014). These measures are described below.

5.3.8.1 Susceptibility to Emotional Contagion Scale (Siebert et al., 2007)

This scale was selected based on the postulated role of emotional contagion as a mechanism of dispersing emotional states within groups and teams (Hatfield et al., 1992). It is posited that in groups or teams individuals can be influenced by or become "infected" with the emotional states of others and they begin to mimic those states. Susceptibility to emotional contagion therefore describes the degree to which an individual may become susceptible to being influenced by and share emotions experienced. The emotional contagion effect has been observed not only in burnout but also in depression (Siebert et al., 2007). The scale is a subscale of a larger instrument (The Emotional Empathic Tendency Scale) and it is scored on a 5-point Likert scale e.*g. I become nervous if others around me seem to be nervous* 1= strongly disagree to 5 = strongly agree. Scores are summed up, and higher scores reflect higher vulnerability to emotional contagion. The reported internal consistency was $\alpha = .71$ (Siebert et al., 2007), and in this study it was $\alpha = .65$.

5.3.8.2 The Compassion Satisfaction & Fatigue Subscale of The Professional Quality of Life Scale [ProQoL] (Stamm, 2010)

This widely validated scale was selected to measure compassion satisfaction and compassion fatigue. It contains 30 questions (10 items on compassion satisfaction, 10 on burnout and 10 on Secondary Traumatic Stress - STS). The compassion fatigue scale has two distinct subscales i.e. the burnout and STS scales. Of the compassion fatigue subscales only the burnout subscale was used. This is because while both burnout and STS scales measure negative affect associated with caregiving work and have a shared variance of 34% (r =.58, n=1187), the STS scale addresses a fear component which is not required for the purposes of this study. The ProQol scale is a 5-point Likert scale and in completing the questionnaire participants were required to rate how frequently they experienced certain feelings in relation to their work with patients within the last 30 days. An example item for the compassion satisfaction subscale is I get satisfaction from being able to help people 1 = never to 5 = very often. An example item from the compassion fatigue scale is I feel worn out because of my work as a helper 1 = never to 5 = very often. To calculate scores for participants, individual scale scores are summed to generate total subscale scores and banded into categories of low (22 or less), average (23 and 41) or high (42 or more). Higher scores reflected higher potential for compassion satisfaction and risk of compassion fatigue. Strong internal consistencies have been reported for both the compassion satisfaction α =.88, and compassion fatigue α =.75 subscales. In this study Cronbach alpha for compassion satisfaction was .91 and for compassion fatigue .80.

5.3.8.3 Emotion Regulation Questionnaire (Gross & John, 2003)

Emotion regulation in this study was measured using the Emotion Regulation Questionnaire (Gross & John, 2003). This scale was selected based on the theoretical framework in study and also the psychometric properties of the scale. This 10-item self-reported scale measures a respondent's tendency to regulate their emotions in two ways; firstly, by cognitive reappraisal

(an antecedent emotion regulation strategy – six items) and secondly by expressive (emotional) suppression (a response-modulated emotion regulation strategy – four items). All items are rated on a 7-point Likert scale from 1= strongly disagree to 7= strongly agree. Interpretation of scores is made by calculating the mean scores for males and females in both components of the scale. Mean reappraisal scores in men was reported as 4.6 (normal range 3.66 to 5.54) and in women as 4.61 (normal range 3.59 to 5.63) while mean suppression scores for men was reported as 3.64 (normal range 2.53 to 4.5) and for women as 3.14 (normal range 1.96 to 4.32) (Gross & John, 2003). The ERQ demonstrates good internal consistency α = .79 for reappraisal and α = .73 for suppression (Gross & John, 2003). In this study Cronbach alpha for reappraisal was α = .76, and for suppression α = .80.

5.3.8.4 The Short Profile of Emotional Competence Questionnaire (S-PEC) (Mikolajczak et al., 2014)

Intra and interpersonal components of emotional intelligence were assessed using this 20-item tool. This scale was chosen because it assesses five core components of emotional competence, based on the ability model i.e. (i) identification, (ii) understanding, (iii) expression, (iv) regulation and (v) use of emotions. These components are distinct for each individual's emotions and the emotions of others. Items on the scale are rated on a 5-point Likert scale e.g. *I am good at describing my feelings; with 1 = never to 5 = very often*. The design of the S-PEC allows the researcher to obtain factor scores for both intra and interpersonal components of emotional intelligence. The scale's psychometric properties demonstrate moderate to strong correlations between each subscale ranging from between 0.38 to 0.69 (Mikolajczak et al., 2014). Intrapersonal and interpersonal emotional intelligence have also been demonstrated to be moderately correlated (r = 0.57). Cronbach α for intrapersonal emotional competence = .74, and for interpersonal emotional competence α = .80 (Mikolajczak et al., 2014). In this study Cronbach α for intrapersonal emotional competence = .74 and for interpersonal emotional

competence α = .73.

5.3.8.5 Cognitive Fusion Questionnaire (Gillanders et al., 2014)

The CFQ is a 7-item, 7-point Likert scale questionnaire measuring general cognitive fusion which is defined as "the tendency for behaviour to be overly regulated and influenced by cognition" (Gillanders et al., 2014, p. 84). The tool was selected because it is a type of emotion regulation process that strengthens the automatic effects of verbal thought content on mental processes and behaviour (Hayes, Strosahl, & Wilson, 2011). Cognitive fusion captures an emotional state where the individual can become entangled in their thinking, evaluation judgement, memories and behaves accordingly. These experiences are suggested to control the individual's subsequent behaviour and become an obstacle to them experiencing other sources of stimulus (Gillanders et al., 2014). Additionally, when these aversive experiences fuse with thoughts and behaviour experiential avoidance strategies such as suppression and rumination occur, as a means of ameliorating discomfort. The these short-term avoidance strategies are suggested to eventually become negativity reinforced and over time leading to entrapment in experiential avoidance loops with resultant negative psychological consequences (Hayes , Wilson, Gifford, Follette, & Strosahl, 1996). In the scale total scores are generated by adding items on the scale, with higher scores reflecting higher degree of cognitive fusion. Scale items include for example, *I over-analyse situations to the point where it is unhelpful to me: rated as 1 = never true to 7 = always true*. Reported Cronbach's alpha was .88 (Gillanders et al., 2014). In this study the calculated Cronbach alpha was .95.

5.3.8.6 Two brief open-ended questions

Two brief open-ended questions were included at the end of the questionnaire to help gain a better understanding of the best and worst aspects of doctors and nurses and how those factors might potentially lead to emotional stress and therefore theoretically influence compassion satisfaction and compassion fatigue.

The two questions were:

1. What is the most enjoyable aspect of your role?
2. What is the least enjoyable aspect of your role?

5.4 Data Analysis

Data analysis was undertaken using SPSS statistical software version 23. Preliminary statistical analysis of demographic variables (occupation, gender, age, years since qualification, clinical speciality, years in current speciality and number of hours worked per week) was undertaken using descriptive statistics. Percentages, means, and medians were calculated. Additionally, statistical data was tested for normality using skew < 2.0 and kurtosis < 9.0. This allowed for differences between the two group means of doctors and nurses to be tested with the independent samples t-test (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010). For similarly and differences between specialty areas (i.e. more than two groups) one-way analysis of variance tests (ANOVA) was undertaken (Schmider et al., 2010). The assumption of homogeneity was tested and fulfilled using Levene's *F* test for both ANOVA and t-tests. Correction factor was not applied to t-tests as the focus of the t-testing was only on independent items (Perneger, 1998). Inferential statistics (correlation, regression, and mediation analyses) were undertaken to investigate relationships between explanatory and dependent variables. For regression analysis cases with missing data were excluded pairwise. The explanatory variables were entered using the backward elimination method until a parsimonious model emerged. Variance inflation factors were below 10 and tolerance statistics above 0.2 (to indicate non-

multicollinearity). Mediation analysis was undertaken using the PROCESS macro (Hayes, 2017). For mediation analysis, bootstrap confidence intervals were generated for estimation of indirect effects. Mediation was established when the 95% bootstrap confident intervals for the indirect effect did not cross zero. Content analysis was used to analyse two the short open-ended questionnaire items. They were included to provide an understanding of the best and worst aspects of doctors and nurses' roles and how factors associated with those aspects of their work might cause emotional stress and potentially influence compassion and fatigue.

5.4.1 Mediation analysis

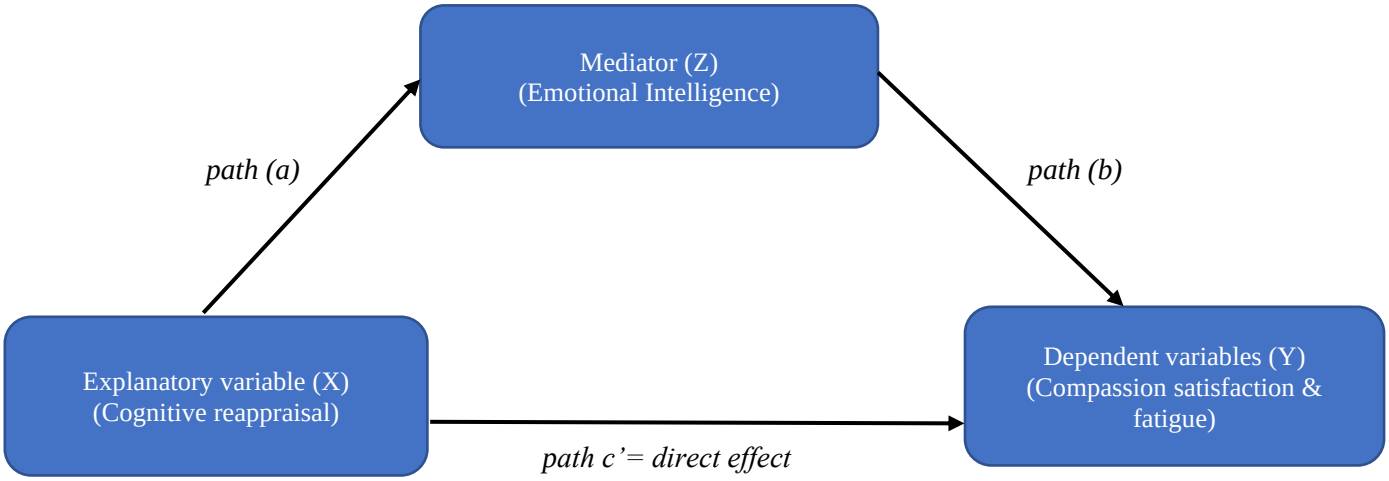
Mediators are variables that add to the overall variance accounted for in models by providing explanation of 'why' dependent and independent variables are related (Collins, Graham, & Flaherty, 1998). Mediation analysis therefore refers to the transmission of the effect of explanatory variables on dependent variables through one or more mediators (Baron & Kenny, 1986). For example, in a model where cognitive reappraisal (an explanatory variable) is thought to relate to compassion satisfaction or compassion fatigue, an enhancing emotional resource which can be taught e.g. emotional intelligence (the mediator) might help explain why cognitive reappraisal is related to compassion satisfaction and fatigue. An example might be using this model to intervene with a staff member who presents with lack of pleasure from their job secondary to complaints of negative feels of anger or unhappiness because of workplace factors. In the path analysis diagram shown in figure 5 therefore, mediation corresponds to the indirect effect of the explanatory variable on the dependent that transmits via the mediator variable. The indirect effect which represents the effect is the product of the paths *a* and *b*. The magnitude of the indirect effect also indicates the amount of mediation through the mediator. Mediation may be either complete or partial. With complete mediation the entire effect of the explanatory variable is transmitted via the mediator variable and therefore the explanatory

variable has no direct effect on the dependent variable. Instead, its entire effect is indirect. In contrast, with partial mediation the explanatory variable has both a direct and indirect effect on the dependent variable. The direct effect is therefore not mediated, whereas the indirect effect is transmitted through the mediator variable and that variable can be a single or multiple mediators (Zhao, Lynch Jr, & Chen, 2010).

According to Baron & Kenny (1986), for a variable to function as a mediator it needs to meet certain requirements. Firstly, variations in the explanatory variable must significantly account for variations in the presumed mediator i.e. *path a* (figure 5). Secondly variations in the mediator must significantly account for variations in the dependent variable i.e. *path b*. Thirdly when *paths a* and *path b* are controlled, a previously significant relationship between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when *path c′* is zero (Baron & Kenny, 1986). Baron & Kenny (1986) further state that if *path c′* is reduced to zero it strongly suggests that there is evidence for a single dominant mediator. They further describe three regression equations which provide tests for the paths described in figure 5. Their equations establish that for mediation to occur the following conditions must hold: (i) the predictor or explanatory variable must affect the mediator in the first equation i.e. (*path a*); second, the explanatory variable must be shown to affect the dependent variable in the second equation (*path c'), and* third the mediator must affect the outcome variable in the third equation (*path b).* They state that if these conditions hold in the predicted directions then the effect of the explanatory variable on the outcome variable must be less in the third equation than in the second equation. Additionally, Baron & Kenny (1986) suggest that in most areas of the psychological research where different phenomena usually have multiple causes, it is much more realistic to seek mediators that significantly decrease *path c′ rather* completing reducing that path to zero. Theoretically

therefore, Baron & Kenny's (1986) explanations suggest that if a significant reduction in *path c′* occurs it demonstrates that a given mediator is undeniably potent.

In this study, mediation analysis was undertaken using the PROCESS macro statistical software; version 3, template 4 (Hayes, 2017). The PROCESS macro uses an ordinary least square path analysis framework to estimate the direct, indirect, and total effect of the mediation models. The direct effect gives an estimate of the effect of the explanatory variable on the dependent variable, whiles the indirect effect provides an estimate of the explanatory variable on the dependent variable via the mediator and this is estimated from the 95% bootstrap confidence intervals using the percentile method. Mediation was established when the 95% bootstrap confident intervals for the indirect effect did not cross zero (Hayes, 2017). Indirect mediating effects were assessed using the bootstrap method (Preacher & Hayes, 2004) with a total of 5,000 bootstrap samples generated in the analyses. The advantage of using the bootstrapping method is that it does not rely on assumptions about the distribution of the indirect effect as opposed to traditional procedures (Hayes, 2017).



Total effect = direct effect (c') + indirect effect (path a x b)

Figure 5. A conceptual diagram of a mediation relationship between explanatory and dependent variables

5.4.2 Rationale for including a mediator in this study

There are several reasons why investigators may choose to use mediators in social science research, and some of the reasons have been explored in recent studies (MacKinnon , 2011; Mackinnon , 2012; MacKinnon , 1994; Mackinnon & Luecken, 2011). In this study the rationale for including a mediator was:

- ***Build and refine theory*** – A key strength of undertaking mediation analysis is its usefulness in helping to test theory upon which any proposed intervention or therapy programmes are based. This is important because many theories in social sciences and psychological research are usually based on results of cross-sectional studies, where there is usually no experimental randomisation. Mediation analysis can help produce results which provide evidence from strong associative relationships upon which randomised experimental studies might be subsequently conducted and causal inferences made.
- ***Therapy improvement*** – With mediation analysis vital information can be generated to help identify which variables might be useful targets for successful and/or unsuccessful therapy/intervention programmes.
- ***Measurement improvement*** – Mediation analysis does help detect where there is no meaningful effect of a mediator on outcome variables.
- ***Practical implications –*** As most healthcare intervention programmes typically have limited funding, it is vital that the effective components of such programmes are correctly identified and retained, and ineffective components discarded. Mediation analysis plays a vital role in this identification process.

5.4.3 Strategy for analysing two open-ended questions

The two brief open-ended questions were analysed using content analysis. Content analysis is a valuable research technique which allows researchers to examine the nuances of organisational behaviours by permitting researchers to take qualitative data and transform them into quantitative data (Duriau, Reger, & Pfarrer, 2007). A strength of this technique is that the researcher applies 'coding units' to label and analyse qualitative data. These units are not open to interpretation ensuring that they are applied in the same manner over time and by different researchers (Morris, 1994). Another strength of this technique is that it allows researchers to gather and analyse a large number of responses (such as in this study) which may be difficult to analyse using traditional qualitative analysis techniques. Content analysis allows for statistical analysis to be conducted and quantitative data is usually the end result of the procedure (Duriau et al., 2007). A limitation of this technique is that causality cannot be established from data generated because the technique merely helps describe the data. Seven simple steps were applied using this technique; (i) collecting the data (responses), (ii) familiarisation with the responses, (ii) identifying coding units for the responses, (iii) generating common themes from the responses and (iv) applying coding units to themes, (v) generating a tally of the number of times coding units applies to themes, (vi) generate common theme statistics using descriptive statistics and (vii) reporting findings.

5.5 Chapter summary

This chapter has outlined the methodology and methods used in this study. The epistemological stance was positivism and it was laid within a pragmatic philosophical paradigm of salutogenic philosophy. Salutogenesis emphasises the role of factors that support health and well-being, and not factors that cause disease. Conceptual frameworks relating to creation of compassion satisfaction and fatigue were also presented. A proposed theoretical model was also postulated

to address the research question. In formulating that model, exiting theories on emotion regulation, emotional intelligence and stress were critically examined. Based on those theories, including Cohen & Wills matching principle, cognitive reappraisal and emotional intelligence were respectively proposed as explanatory and mediator variables in testing the proposed model. The next chapter will present the study findings.

Chapter Six: Results

6.1 Introduction

The chapter begins with a presentation of the participant characteristics. It is followed by a discussion of the preliminary data analysis and then a presentation of the main study findings. The main study findings are presented as (i) findings from the regression analysis which determined the predicting variable(s) for compassion satisfaction and fatigue, (ii) the mediation analysis, which determined the overall variance accounted for in models by the mediator and (iii) results of the two short open-ended questionnaire items.

6.2 Participant characteristics

Four hundred and eighty-seven (n=487) of five hundred and thirteen (n=513) questionnaires returned questionnaires were analysed. Twenty-six (n=26) questionnaires were excluded because of significant missing data and results are displayed in table 5, page 101. Regarding compassion satisfaction and compassion fatigue the majority of participants scored averagely – table 6, page 102. Only one doctor scored highly on compassion fatigue and no nurse participant scored highly on compassion fatigue. Mean compassion satisfaction and fatigue scores for doctors and nurses are displayed in table 5, page 101. The overall mean compassion satisfaction score for participants was 39.5 (SD = 5.7) and for compassion fatigue 25.3 (SD = 5.5).

Table 5

Characteristics of Participants

Variable	***Doctors N=120***	***Nurses N=366****
	N (%)	**N (%)**
Male	58 (48%)	34 (9%)
Female	62 (52%)	332 (91%)
Patient contact	115 (24%)	364 (76%)
	Median (Range)	***Median (Range)***
Age (years)	43 (23-64)	42 (22-67)
Working hours	48 (5–72)	38 (12–75)
Work experience (years)	20 (0.3-52)	13 (0.4-45)
Scale Scores	***Mean (SD)***	***Mean (SD)***
Compassion satisfaction score	39.03 (5.8)	39.69 (5.7)
Compassion fatigue score	25.93 (5.9)	25.14 (5.3)
Intrapersonal E.I score	34.96 (4.5)	34.09 (3.7)
Interpersonal E.I score	35.57 (4.2)	34.51 (3.8)
Cognitive fusion score	22.41 (4.0)	23.20 (9.0)
Cognitive reappraisal score	4.67 (1.0)	4.86 (0.8)
Expressive suppression score	3.77 (1.2)	3.88 (1.1)
Emotional contagion score	16.47 (1.8)	16.51 (2.1)

*N= number of participants, % = percentage, SD = standard deviation, E.I = emotional intelligence, *one participant did not state gender*

Respondents by specialty area: N (%)						
Medicine	***Surgery***	***Paediatrics***	***Obstetrics***	***Anaesthetics***	***Research/education***	***Others***
242 (51)	122 (26)	43 (9)	12(3)	9 (2)	17 (3)	23 (5)

N= number of participants, % = percentage

Table 6

Compassion Satisfaction and Fatigue Levels

	Low	Average	High	Total (n)
Compassion Satisfaction				
Doctors	1(1%)	82 (68%)	37 (31%)	120
Nurses	1 (%)	236 (64%)	130 (35%)	367
Specialty areas				
Medicine	2 (1%)	157 (65%)	83 (34%)	242
Surgery	0 (0%)	80 (66%)	42 (34%)	122
Other areas *	0 (0%)	71 (65%)	38 (35%)	109
Compassion fatigue				
Doctors	38 (32%)	81 (67%)	1 (1%)	120
Nurses	114 (31%)	253 (69%)	0 (0%)	367
Specialty areas				
Medicine	74 (31%)	168 (69%)	0 (0%)	242
Surgery	38 (31%)	84 (69%)	0 (0%)	122
Other areas *	37 (34%)	71 (65%)	1 (1%)	109

****** All other areas including radiology, research and education, paediatrics, obstetrics, and anaesthetics*

6.3 Preliminary data analysis

6.3.1 Relationships between demographic variables, compassion satisfaction and compassion fatigue

In respect of demographic factors, increasing age (r = .16, p < .01) and clinical experience (r = .13, p < .*01*) correlated positively with compassion satisfaction (table 7). Negative associations were however observed between (i) compassion fatigue and participant's age (r = -.20, p < .01), and also (ii) compassion fatigue and clinical experience (r = -.22, p < .01), and the shared variance between age and clinical experience was 77%. As expected, number of hours worked per week correlated positively with participant's compassion fatigue (r = .15, p < .01). Finally, a one-way analysis of variance (ANOVA) tests did not demonstrate significant differences between participants mean compassion satisfaction and compassion fatigue scores by specialty areas (appendix 1).

6.3.2 Relationships between explanatory variables in participants

Independent samples *t*-tests did not demonstrate statistically significant differences between doctors and nurses on compassion satisfaction, compassion fatigue, intrapersonal emotional intelligence, and expressive suppression. On interpersonal emotional intelligence however, nurses had a smaller mean score M = 34.51 (SD = 3.87), p =.021, CI [-1.947, -.164] which compared with doctors mean score of M = 35.57 (SD = 4.21). The mean difference between scores was therefore -1.055 and Cohen's d = 0.26. Regarding cognitive appraisal, doctors had a numerically smaller mean score M = 4.67 (SD = 1.04), p =.049, CI [.0007, .3805] which compared with nurses mean score of M = 4.86 (SD = 0.83). The mean difference between scores was therefore .1906, Cohen's d = 0.20. One-way analysis of variance (ANOVA) tests did not demonstrate significant differences between participants mean compassion satisfaction and compassion fatigue scores by specialty areas.

6.3.3 Correlational Analysis - relationships between explanatory, mediator, and dependent variables in participants

As observed in table 7, high shared variances were not a significant issue between the six explanatory variables. This therefore meant that it was relatively easy to assess the relative importance of each explanatory variable in predicting the dependent variables of compassion satisfaction and fatigue. The highest shared variance for among the explanatory variables was as expected found between intra-and-interpersonal emotional intelligence (r =.49, r^2 = .2401, shared variance = 24%). Shared variances for cognitive fusion and intrapersonal emotional intelligence was 13% and with interpersonal emotional intelligence it was .02%. Similarly, the shared variances between cognitive reappraisal and intrapersonal emotional intelligence was only 6%, and between cognitive reappraisal and interpersonal emotional intelligence (.01%). With a shared variance of 11%, a moderately positive correlation was noted between cognitive fusion and emotional contagion. Reassuringly, all of these shared variances are relatively low. A strong positive relationship was observed between cognitive fusion and compassion fatigue with a negative relationship observed with compassion satisfaction. Not surprisingly, an inverse relationship was observed between cognitive reappraisal and cognitive fusion.

Table 7

Pearson's Correlations between the Six Explanatory Variables, Compassion Satisfaction and Compassion Fatigue

Variables	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***M***	***SD***
Compassion satisfaction	---							39.52	5.76
Compassion fatigue	**-.72****	---						25.34	5.50
Intrapersonal E.I	**.42****	**-.51****	---					34.39	4.00
Interpersonal E.I	**.19****	**-.16****	**.49****	---				34.79	3.98
Cognitive fusion	**-.35****	**.49****	**-.37****	**-.10***	---			22.84	8.80
Cognitive reappraisal	**.31****	**-.29****	**.25****	.013	**-.12****	---		4.81	.898
Expressive suppression	**-.15****	**.23****	**-.39****	**-.24****	**.13****	.04	---	3.83	1.15
Emotional contagion	-.08	**.21****	**-.10***	-.04	**.33****	**.10***	**.09***	16.52	2.09

*** = p < .01(2-tailed), * = p < .05 (2-tailed), Significant correlations in bold. N = 487, SD = standard deviation, M = Mean, E.I = Emotional Intelligence*

6.4 Main study findings

6.4.1 Regression analysis

Using the backward elimination method, a parsimonious model emerged. In that model intrapersonal emotional intelligence, cognitive reappraisal, and cognitive fusion all significantly predicted compassion satisfaction and compassion fatigue (table 8 and 9). Intrapersonal emotional intelligence was however the strongest explanatory variable of compassion satisfaction ($\beta = .29$, $p < .001$) and compassion fatigue ($\beta = -.35$, $p < .001$). Expressive suppression, emotional contagion and interpersonal emotional intelligence did not significantly predict either compassion satisfaction or compassion fatigue (see appendix 1, page 205).

Table 8

Parsimonious regression model 1: Explanatory Variables on Compassion Satisfaction (n = 487)

Variable	***B***	**SE *B***	**β**	***p* value**	**95% CI lower**	**upper**
Constant	21.22	2.7	----	----	----	
Intrapersonal E. I	.43	.06	.29	.000*	.305	.565
Cognitive fusion	-.14	.02	-.22	.000*	-.202	-.087
Cognitive reappraisal	1.38	.27	.21	.000*	.847	1.922
***R^2* = .274 F = 53.66, *p* < .001**						

**p < .001, B = unstandardized beta coefficient, β = standardised beta coefficient, E.I = Emotional intelligence, CI = confidence interval*

Table 9

Parsimonious regression model 2: Explanatory Variables on Compassion Fatigue (n = 487)

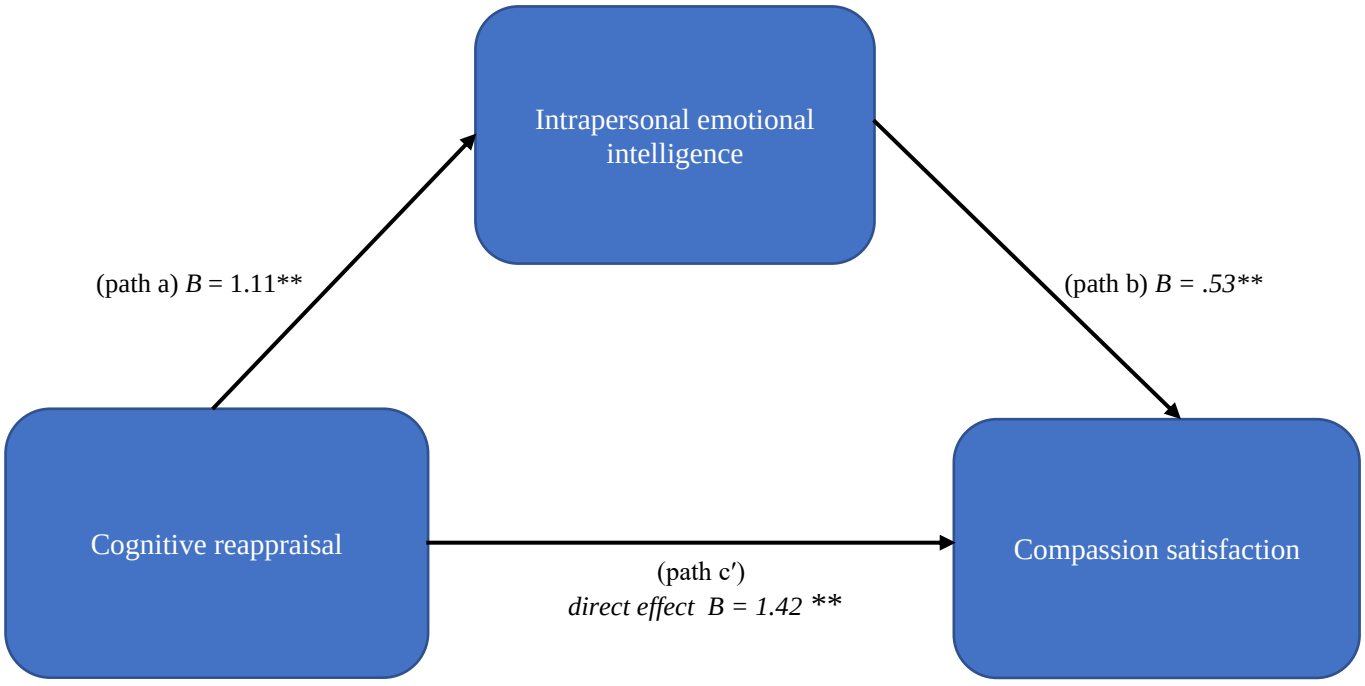
Variable	***B***	**SE *B***	**β**	***p* value**	**95% CI lower**	**upper**
Constant	41.70	2.36	----	----	----	
Intrapersonal E. I	-.48	.05	-.35	.000*	-.599	-.373
Cognitive fusion	.21	.02	.34	.000*	.166	.265
Cognitive reappraisal	-.95	.23	-.15	.000*	-1.421	-.488
***R^2* = .395 F = 92.66, *p* < .001**						

**p < .001, B unstandardized beta coefficient, β standardised beta coefficient, E.I Emotional intelligence, CI confidence interval*

6.4.2 Mediation analysis

6.4.2.1 Cognitive reappraisal as an explanatory variable of compassion satisfaction mediated by intrapersonal emotional intelligence

The relationship between cognitive reappraisal as an explanatory variable of compassion satisfaction mediated by intrapersonal emotional intelligence was tested and a significant model emerged; R^2 = .224, F (2, 431) = 62.290, p < .001. As observed in figure 6, the model explained 22% of the variance in compassion satisfaction. The model also shows that the unstandardized beta coefficients (B) between cognitive reappraisal and intrapersonal emotional intelligence and between intrapersonal emotional intelligence and compassion satisfaction were statistically significant. The bootstrapped indirect effect between cognitive reappraisal and compassion satisfaction mediated by intrapersonal emotional intelligence was statistically significant (B = .59, BCI .298, .927) and indicating partial mediation by intrapersonal emotional intelligence.



***Indirect effect* (a x b) *B* = .59, 95% BCI [.298, .927]**

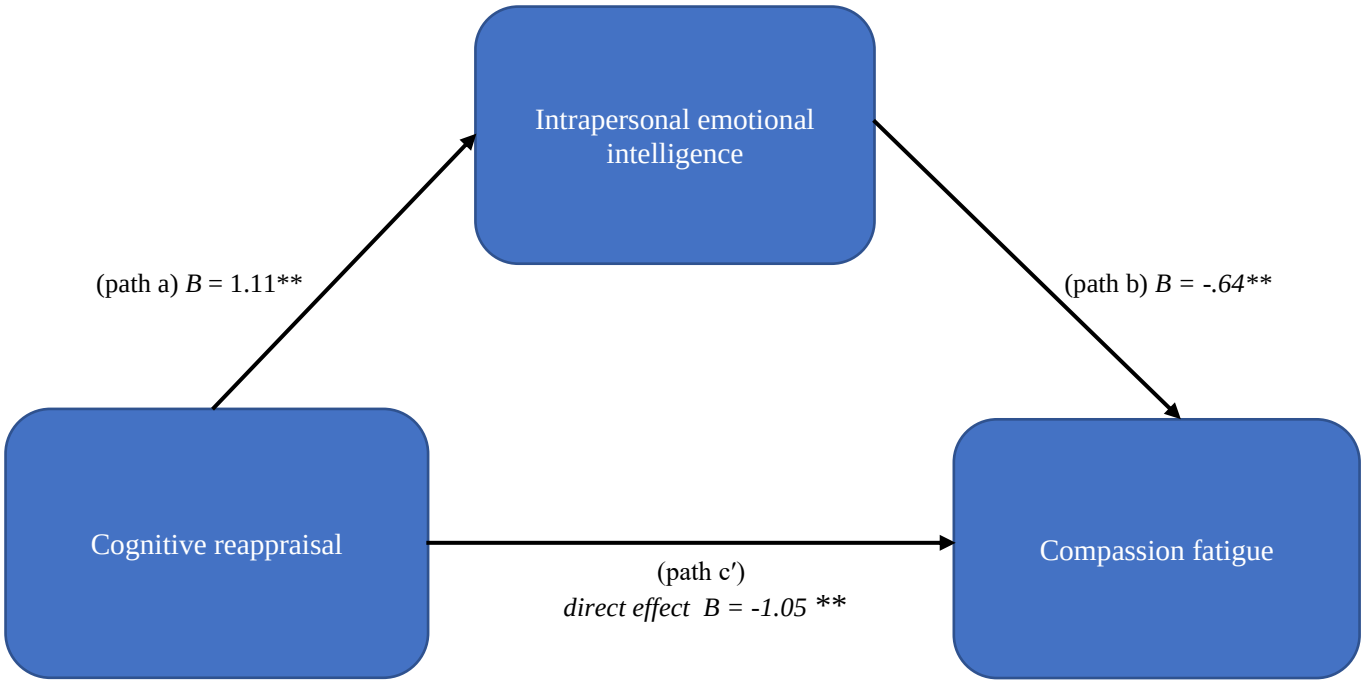
R^2 = .224, F (2, 431) = 62.290, p < .001

***p < .001, B = Unstandardized beta coefficient, BCI = Bootstrap Confidence Intervals (5000 bootstrap samples), EI = Emotional intelligence, N =434*

Figure 6. Relationship between cognitive reappraisal and compassion satisfaction mediated by intrapersonal emotional intelligence

6.4.2.2 Cognitive reappraisal as an explanatory variable of compassion fatigue mediated by intrapersonal emotional intelligence

The relationship between cognitive reappraisal as an explanatory variable of compassion fatigue mediated by intrapersonal emotional intelligence was tested and a significant model emerged; R^2 = .288, F (2, 431) = 87.126, p < .001. As demonstrated in figure 7, the model explained 29% of the variance in compassion fatigue. The model also indicates that the unstandardized beta coefficient (B) between cognitive reappraisal and intrapersonal emotional intelligence and between intrapersonal emotional intelligence and compassion fatigue were statistically significant. Similarly, the bootstrapped indirect effect between cognitive reappraisal and compassion fatigue mediated by intrapersonal emotional intelligence was also statistically significant (B = -.72, BCI -1.099, -.378) with the magnitude of B indicating partial mediation by intrapersonal emotional intelligence.



***Indirect effect* (a x b) *B* = -.72, 95% BCI [-1.099, -.378]**

R^2 = .288, F (2, 431) = 87.126, p < .001

***p < .001, B = Unstandardized beta coefficient, BCI = Bootstrap Confidence Intervals; 5000 bootstrap samples; N =434*

Figure 7. Relationship between cognitive reappraisal and compassion fatigue mediated by intrapersonal emotional intelligence

6.4.3 Analysis of two open-ended questions

The two open-ended questions analysed by content analysis were:

6.4.3.1 Q1 "What is the most enjoyable aspect of your role"

It was observed from the themed statistics (table 10 and figure 8, page 111) that the three major single themed items were all related to patients or their care. They were (i) "making a difference", (ii) "patient care" and (iii) "patient contact". These three themes accounted for 54% of what doctors and nurses considered as enjoyable aspects of their role. From themed statistics it was also clear that the remaining four themes accounted for 46% of what doctors and nurses considered to be enjoyable aspects of their role. Those four themes were not directly related to patients and their care. Individual responses from all themed items are available in appendix 1.

Summary responses of the three major single-itemed themes:

- ***Theme 1***: **Making a difference**: In respect of making a difference, it was clear that some participants perceived this activity as being able to intervene directly by doing something tangible such as "Being able to see a patient walk off the ward after they have had life changing injuries like a road traffic accident" (participant 225). For (participant 149) it was the "immediate feedback from the patients that they feel good and are pain free after my anaesthetic". Others considered making a difference as being less of an immediate physical task such as "making a difference (even just making a patient smile)" (participant 197). Participant 246 stated: "knowing the treatments I put in place generally have an impact on patient care".

- ***Theme 2***: **Patient care:** Some participants interpreted patient care in very practical terms such as participant 103 stating "hands on care being with patients", while others adopted a more altruistic view such as participant 19 "Contributing to something bigger and more important, than myself". Others took a philosophical stance like participant 133 stating "helping a patient to have a positive experience".

- ***Theme 3***: **Patient contact:** Patient contact was regarded largely as interactions with patients and not necessarily giving direct hands on care, such as participant 424 describing it as "working with the fun and nice people", participant 445 described it as "contact with my patients, smile I put on their faces, every day is different, every day I can make a difference" while participant 281 described it in more emotional terms stating "Getting close emotional contact with patients…"

Table 10

The Best Aspects of Doctors and Nurses Roles

Theme	Frequency count	Percentage (%)
Contact Families	3	0.73
Team working	33	8.05
Satisfaction with patient/job	49	11.05
Patient contact	50	12.2
Patient care	82	20
Making a difference	90	21.95
Other reasons (includes role variety/solving problems/helping/self-development)	103	25.12
Total	**410**	**100%**

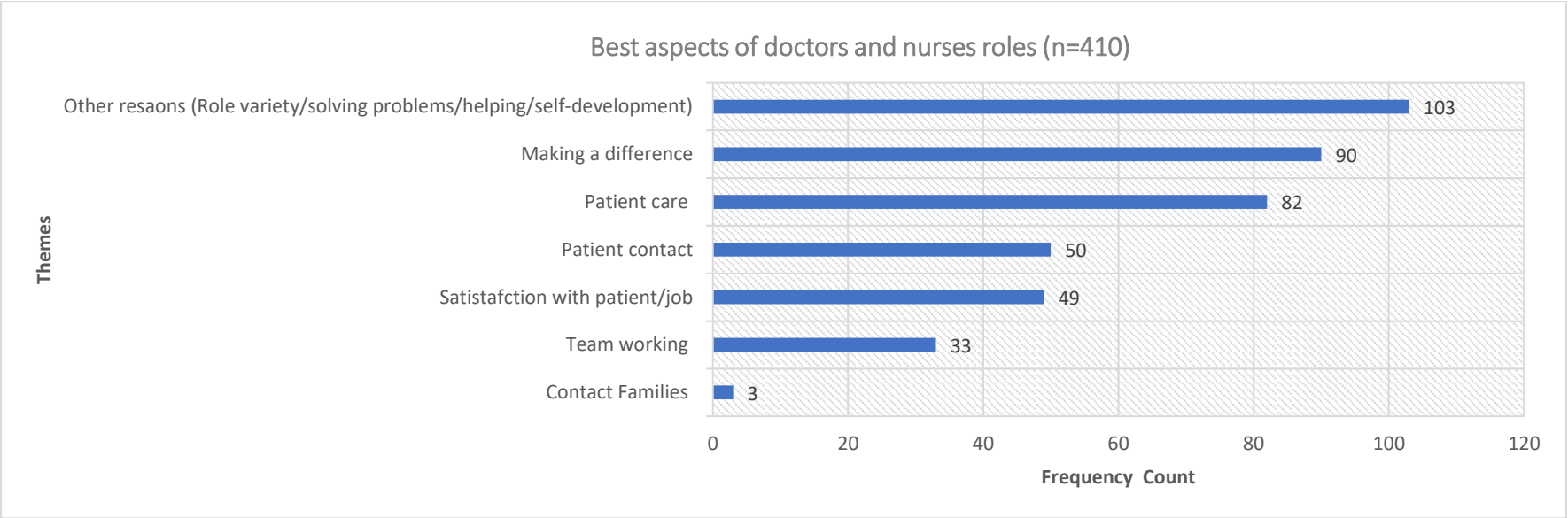


Figure 8. The best aspects of doctors and nurses role

6.4.3.2 Q2: "What is the least enjoyable aspect of your role"

Themed statistics showed that five of the thirteen single themes items accounted for approximately 60% of the least enjoyable aspects of doctors and nurses role. These five items were bureaucracy, lack of support, lack of resources, stress, and workplace politics. It was notable that all of those factors were related to the work environment and not direct patient care (figure 9). Eight other themes accounted for 40% of the least enjoyable aspects of doctors and nurses role (figure 9). It was observed that only one theme on this question directly involved patients care (i.e.) patient deaths (table 11, page 114). It was also interesting to observe that themes such as work life balance, working hours and workload scored proportionally less by compared with the five high scoring themes of bureaucracy, lack of support, lack of resources, stress, and workplace politics. Individual items from all themed items are available in appendix 1.

Summary responses of the five major single-itemed themes:

Theme 1: ***Bureaucracy*****:** Responses on this theme were consistent in their interpretation**.** For example participant 119 stated "hours on the computer filling in paperwork that a data manager could do", participant 153 stated "red tape, being asked to do something that you know will make no difference", While participant 270 states "paperwork, protocolisation and bureaucracy". Participant 293 wrote "pointless bureaucracy", while participant 334 stated "endless tick lists/form filling".

Theme 2: ***Lack of support*****:** Lack of support was interpreted variously ranging from physical capability such as with participant 1 who wrote "lack of senior support, pressure to do more than what my disability allows"/ Participant 25 wrote "Not always feeling that my role is recognised or actually deemed that important by certain individuals". Participant 99 commented "feeling helpless", and another stated "being told off by managers" (participant 274). "Not being appreciated or being looked down upon" was reported by participant 302, while participant 303 wrote "the system and lack of support from senior management". Participant 330 stated "being undervalued by Consultant colleague", and Participant 409

commented “getting treated like crap by managers/HR/the government”.

Theme 3: ***Lack of resources*****:** Responses to this theme were varied e.g. participant 46 said “lack of staff”, while participant 127 stated “trying to give perfect care to patients even though you are understaffed”. Participant 260 wrote “being hassled by bed manager or being short staffed” and others alluded to much broader statements like “Lack of funding for training” (participant 275), “financial cuts in every area of nursing” (participant 234), and “when patients have to wait too long in recovery room unnecessarily for a ward bed to go to, after having their operation” (participant 93).

Theme 3*:* ***Stress*****:** Stress was perceived variously by participants e.g. lacking control of one’s work e.g. “dealing with aspects of care outside of my control” (participant 268), “unrealistic management expectations” (participant 27), “having lots of conflicting deadlines” (participant 11); pressures of work e.g. “time and management pressures” (participants 95) , and “time pressures on care” (participant 138). Others stated, “Worry over making mistakes and time pressures” (participant 322), “facing the same scenario repeatedly” (participant 355) and “continual pressure / taking staff down performance/sickness route” (participant 357).

Theme 5: ***Workplace politics*****:** This theme was relatively straightforward in deciphering: for example Participant 34 wrote “politics within department participant”, “dealing with the politics of hospital life” (participant 115), “politics of the system” (participant 148), “feeling powerless in an organisation, politics” (participant 325), and “internal politics, lack of ability to progress” (participant 327).

Table 11

The Least Enjoyable Aspects of Doctors and Nurses Roles

Theme	Frequency Count	Percentage (%)
IT	2	0.48
Complaints	6	1.45
Patient deaths	9	2.17
Work life balance	10	2.42
Workload	16	3.86
Working hours	17	4.11
Unhappy with NHS systems	19	4.59
Workplace Politics	31	7.49
Stress	44	10.63
Lack of resources	52	12.56
Lack of support/Conflict (Colleagues & Management)	57	13.77
Paperwork/bureaucracy	65	15.7
Other reasons (including salary, commute, feeling helpless, angry/unhappy relatives)	86	20.77
Total	**n=414**	**100**

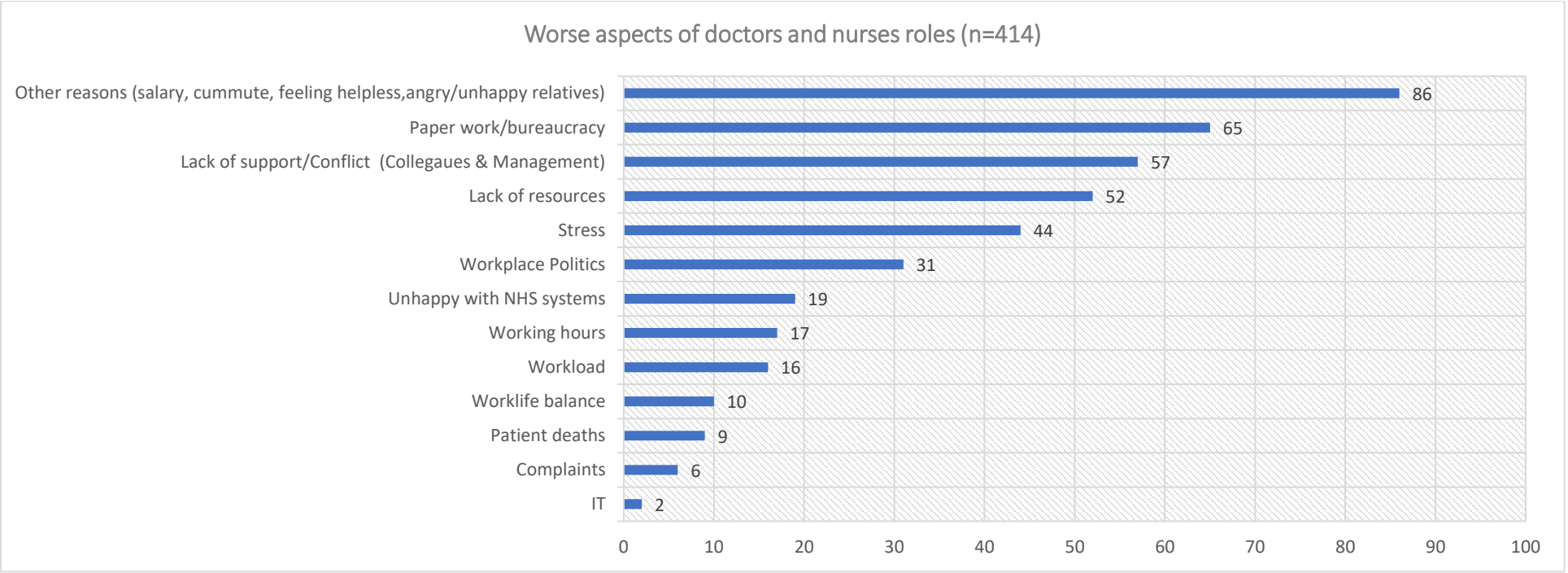


Figure 9. The least enjoyable aspects of doctors and nurses role

6.5 Chapter summary

In exploring the relationship between cognitive reappraisal, emotional intelligence and compassion satisfaction and fatigue in doctors and nurses, this study has reported a new finding that intrapersonal emotional intelligence exerted the strongest influence in predicting compassion satisfaction and fatigue in doctors and nurses. From mediation analysis it was found that intrapersonal emotional intelligence explained 22% in the variance of compassion satisfaction and 29% in the variance in compassion fatigue. Content analysis of the two brief open-ended questions indicated that three themes accounted for 54% of what doctors and nurses considered as enjoyable aspects of their role while five items accounted for 60% of the least enjoyable aspects of doctors and nurses role. Findings from the open-ended questions provide rich context and support the quantitative findings. The final chapter will provide a summary of evolution of the thesis, together with a discussion of the study's findings within the much wider context of existing research literature and NHS policy and beyond.

Chapter seven: Discussion, Policy implications, Limitations, and Future directions

7.1 Introduction

This thesis investigated the relationship between cognitive reappraisal, emotional intelligence and compassion satisfaction and fatigue in doctors and nurses. Given the exploratory nature of this study, a brief initial overview of how the thesis evolved is presented. The overview begins with the study's aims, followed by succinct summaries of steps taken throughout all chapters leading to the main study findings which are discussed within the context of existing academic literature and NHS policy. Finally, the limitations and future research directions are presented.

7.2 Thesis evolution

The aim of this study was to explore relationships between emotion management strategies, compassion satisfaction and compassion fatigue in doctors and nurses. The objective was to identify predicting variable(s) for compassion satisfaction and fatigue. The study also explored free text data on the best and worst aspects of doctors and nurses' roles, anticipating that identification of such workplace factors might be associated with negative emotions in the workplace. Overall, this study anticipated that if significant relationships are found between the variables examined, important target variables could emerge which may be useful for possible application in psychological interventions aimed at enhancing compassion satisfaction and/or reducing compassion fatigue in doctors and nurses. It is important to emphasise that the availability of innovative and evidence-based and psychological interventions to support doctors and nurses to remain in work i.e. minimise staff attrition remains a priority area for service development within the existing *NHS* policy framework of Improving Access to Psychological Therapies Programme (IAPT) (DoH, 2018). From a wider academic literature perspective (see chapter one) consensus was also observed that common workplace factors associated with workplace stresses can influence work satisfaction in healthcare workers (Lemaire & Wallace, 2017; Orton & Gray, 2015; Wilkinson, 2015). Some of these factors include prolonged working hours, high workloads, pressured work environments, unsupported work environments. In this study, similar factors were identified from

the two free text open-ended questionnaire items. They included bureaucracy, lack of support, lack of resources, stress, and workplace politics. Importantly however there was paucity of information on the role emotion management strategies in the management of negative emotions e.g. anger or anxiety emanating from workplace factors, and how those negative emotion influence compassion satisfaction and/or compassion fatigue.

In the systematic review, a commonly used emotion regulation strategy (cognitive reappraisal) was found to be associated with positive work outcomes such as clinician work satisfaction, reduction in occupational stress and improved clinician health and well-being. The systematic review also identified that higher emotional intelligence was positively associated with clinician compassion satisfaction, and negatively with compassion fatigue. What remained unclear however was the mechanism of those associations, and the extent to which cognitive reappraisal and/or emotional intelligence influenced compassion satisfaction and fatigue in doctors and nurses. Thus, results of the systematic review highlighted an important gap in the literature and that gap underscored the need to further investigate emotion regulation strategies and emotional intelligence and their relationship with compassion satisfaction and fatigue in doctors and nurses.

In chapter three a review of emotion theory helped elucidate much more clearly the construct of emotion, how it has been defined and measured over the years, and the importance of differentiating that construct from the construct of emotion regulation. In addition, emotion regulation and emotional intelligence theories were also examined. Understanding emotion regulation theory was salient in providing clarity in respect of various emotion regulation models reviewed and associated outcomes. Gross & Thompson's (2007) model (figure 2, page 57) was of particular interest because of its widespread use in among researchers and the model's use of goal directed processes such as situation selection, situation modification, attentional deployment, cognitive change and response modulation to influence the intensity, duration and quality of emotions experienced by the individual.

The relevance of examining emotional intelligence theory laid in gaining better understanding of how it can be identified, quantified, and assessed in individuals. Trait and ability-based emotional intelligence were also critically reviewed in relation to the constructs of compassion satisfaction and fatigue. Trait-based emotional intelligence was discussed in relation to how it is subjectively assessed compared with observer-based ability-based models. In this study, the ability-based model was preferred because of evidence suggesting that it offered a simpler and more practical framework for understanding individual differences within the four dimensions of emotion perception, understanding, use, and management (Mayer, Roberts, & Barsade, 2008). Besides, ability-based emotional intelligence presumes that emotional competencies may be taught or learned and therefore likely to be of practical value for health care professionals like doctors and nurses (Mayer & Salovey,1997).

A model of compassion satisfaction and fatigue for doctors and nurses was proposed in chapter five (methodology and methods section). In the model, negative work-related emotions were conceptualised as potential job demands that might result in either mood congruent or positive outcomes like compassion satisfaction or mood incongruent (negative) outcomes like compassion fatigue. Based on the matching principle (page 83) two potential emotional resources that could be reliably measured i.e. cognitive reappraisal and emotional intelligence were respectively selected as antecedent and mediating variables in the proposed model to achieve greater compassion satisfaction and/or minimise compassion fatigue in doctors and nurses. The matching principle theorizes that emotional resources are deemed more likely to be protective or beneficial to wellbeing if selected from the same qualitative dimensions as the demands, and the greater the congruence between the demands and the potential resource the stronger the beneficial/protective effects observed (Cohen & Wills, 1985).

In the data analysis section of chapter five, the backward elimination method was used for regression analysis. That method helped establish which explanatory variables predicted compassion satisfaction and compassion fatigue. Six possible explanatory variables were tested namely, cognitive appraisal,

expressive suppression, intrapersonal emotional intelligence, interpersonal emotional intelligence, cognitive fusion, and emotional contagion. A parsimonious model of three variables emerged, namely (i) cognitive reappraisal, (ii) cognitive fusion, and (iii) intrapersonal emotional intelligence. Mediation analysis helped explain the overall variance in the tested model. Finally, content analysis was used to analyse free text comments from two short open-ended questionnaire items. The rationale for using content analysis was that it permitted transformation of the free text (non-numerical data) from the two free text questionnaire items into quantitative (numerical) data.

7.3 Discussion of the main study findings

7.3.1 Demographic factors and prevalence of compassion satisfaction and compassion fatigue

Regarding the influence of selected demographic variables on compassion satisfaction and compassion fatigue, increasing age and clinical experience correlated positively with compassion satisfaction and the negatively with compassion fatigue. The high shared variance between age and clinical experience suggested that maturity and or clinical experience appeared to play an important role in compassion satisfaction and compassion fatigue. It was observed that mature or experienced participants appeared to experience less compassion fatigue compared to less mature or experienced participants. This finding may have implications for younger clinicians in the NHS partly because of the recognised associations between compassion fatigue and staff-turnover, days lost at work, patient safety risks, and poor clinician judgment (Coetzee & Klopper, 2010). A shared variance of 52% was observed between compassion satisfaction and fatigue and the negative relationship between two variables could suggest the possibility of a possible buffering effect against the deleterious effect of compassion fatigue in doctors and nurses. This buffering effect has been posited by Stamm (2005), and supported in the wider literature by other researchers (Murray et al., 2009; Collins & Long, 2003). From the qualitative responses obtained from the two-open ended questionnaire items, the most common single themed item regarding doctors and nurses roles was ‘making a difference’. It accounted for 21% of responses, compared with only 10% of responses which identifying ‘stress’ as the single worst themed item. This finding supports results from

the quantitative aspect of this study; notably that the overall mean compassion satisfaction score for participants was higher i.e. 39.5 than for the compassion fatigue scores 25.3. When prevalence scores in this study were compared with results from a recent systematic review of thirty studies it was evident that the overall trend of scores demonstrate a pattern consistent with previous studies which have found that in any given sample of professional caregivers, compassion satisfaction scores generally tend to be higher than compassion fatigue scores (De La Rosa, Webb-Murphy, Fesperman, & Johnston, 2017). This therefore strengthens the generalisability of this finding.

7.4 Regression analysis

7.4.1 Relationships between cognitive reappraisal, emotional intelligence and compassion satisfaction and fatigue

From the parsimonious, a variance in compassion satisfaction of 27% and compassion fatigue of 40% explained by intrapersonal emotional intelligence, cognitive reappraisal and cognitive fusion provide strong evidence of their relevance in clinical settings in influencing the two dependent variables. The strongest single explanatory variable for both compassion satisfaction and fatigue was however intrapersonal emotional intelligence. It predicted compassion satisfaction positively and compassion fatigue negatively. It was also observed that while cognitive reappraisal and cognitive fusion significantly predicted compassion satisfaction and compassion fatigue, the strength of those explanatory relationships were numerically smaller when compared with that of intrapersonal emotional intelligence. Additionally, it was observed that while cognitive reappraisal, like intrapersonal emotional intelligence predicted compassion satisfaction positively, cognitive fusion predicted it negatively. Similarly, while cognitive fusion was observed to predict compassion fatigue positively, cognitive reappraisal and intrapersonal emotional intelligence predicted it negatively. That suggests that minimising or eliminating cognitive fusion and increasing cognitive reappraisal and/or intrapersonal emotional intelligence is beneficial to enhancing compassion satisfaction and reducing compassion fatigue. A possible explanation for the positive association between cognitive fusion and compassion

fatigue might be that when doctors and nurses become enmeshed entangled in their thoughts and evaluations during stressful or aversive emotional experiences in clinical settings these thoughts persist to dominate their subsequent behaviours thereby preventing positive cognitive processes from influencing the aversive thoughts and behaviours (Gillanders et al., 2014). It is therefore plausible that as clinicians' aversive thoughts and behaviours become 'fused' they experienced less compassion satisfaction and more compassion fatigue.

7.5 Mediation analysis

7.5.1 Cognitive reappraisal as an explanatory variable of compassion satisfaction and fatigue with intrapersonal emotional intelligence as a mediator

The relevance of intrapersonal emotional intelligence as a mediator between cognitive reappraisal and compassion satisfaction and fatigue is demonstrated by it accounting for 22 % and 29% respectively in the variance of those variables. In explaining the mediating role of intrapersonal emotional intelligence on compassion satisfaction and fatigue, it is important to state that associations between higher levels of emotional intelligence and positive health and wellbeing life outcomes have been previously demonstrated (Mikolajczak et al., 2015; Tsaousis & Nikolaou, 2005). Similarly, a correlation of 0.22 between emotional intelligence and job performance has been previously reported (Van Rooy & Viswesvaran, 2004). More recent studies have also suggested that emotional intelligence is related to a myriad of other positive adaptive outcomes such as course work, learning, and general life satisfaction (Zeidner, Matthews, & Roberts, 2012). The positive influence of emotional intelligence on work performance also brings to the fore the role of ability-based emotional intelligence and the interface between emotions and cognition in enhancing work performance and adjustment. Examples of the relevance of this interface are demonstrated in the ability of individuals to deploy adaptive coping strategies such as positive re-interpretation of events which in turn is associated with positive emotional experiences and lower levels of negative psychological outcomes such as burnout (Peña-Sarrionandia et al., 2015), intentions to leave employment, job satisfaction and employee turnover (Kafetsios &

Zampetakis, 2008; Sy et al., 2006). The ability-based emotional intelligence model (adopted in this study) is argued to deliver certain unique advantages, especially by offering a framework for mapping individual differences in emotional skills within the four dimensions of perception, understanding, using and managing emotions (Mayer, Roberts, & Barsade, 2008).

The partial mediating effect of intrapersonal emotional intelligence on compassion satisfaction and compassion fatigue may be of some importance in future theory building. Thus, in hypothesising about other potential mediators, findings from the two short open-ended questionnaire items were examined. With regards to the first open-ended question, "What is the most enjoyable aspect of your role", the observation was made that the theme of 'patient contact' was the most common. Approximately 12% of participants indicated its importance and they described 'patient contact' as not merely providing direct hands on care, but more widely having an emotional connection with patients. In the study, participants used descriptions such as "getting close emotional contact" and the "smile I put on their faces". It is therefore plausible that doctor's and nurse's ability to facilitate delivery of emotional aspects of care for patients and understanding factors might help or hinder delivery of such care can assist in identifying possible additional mediators which might help increase compassion satisfaction and/or reducing compassion fatigue. Emotional comfort has been identified within the theory of psychosocial experience as a therapeutic state vital to the proactive recovery of patients and it includes aspects such as pleasant positive feelings, a state of relaxation, an optimistic outlook to life and less physical discomfort for our patients (Williams, 2003; Williams & Irurita, 2006). The facilitation of emotional comfort for patients may ironically create a compassionate workplace for clinicians and that may in turn increase commitment to the organisation which in turn may impact on the way clinicians manage the impact of emotional distress in the course of their work (Dutton, Worline, Frost, & Lilius, 2006). In respect of the second open-ended questionnaire item i.e. "What is the least enjoyable aspect of your role", it was observed that 'stress' was the dominating theme that was invariably associated with the sub-themes of

bureaucracy, lack of support, lack of resources, workplace politics and other factors including remuneration, staff commute, feeling helpless, and angry/unhappy relatives. In the context of this study stressful emotional experiences encountered by participants was conceptualised as stress. This was grounded in the cognitive-relational theory of stress which emphasises the continuous and reciprocal nature of the interaction between the individual and the environment (Lazarus, 1991). With this conceptualisation in mind clinicians ability to offer emotional comfort to their patients can be compromised if occupational stresses remain unaddressed. The likely mechanism by which this could occur is through the clinician's subjective and negative cognitive evaluations and attributions, particularly when the clinician is under emotional stress and experiencing negative emotions from work-related activities (Farrelly & Austin, 2007). It is hoped therefore that main variable identified in this study i.e. intrapersonal emotional intelligence can serve as a potential target variable for possible psychological interventions aimed at enhancing compassion satisfaction or reducing compassion fatigue in doctors and nurses in clinical settings.

7.6 Policy implications

The availability of evidence-based psychological interventions is one of three elements of current NHS IAPT services. The expectation is that evidence-based therapies will be provided by fully trained and certified practitioners and the therapies matched to specific mental health issues with the intensity and duration designed to enhance outcomes (DoH, 2018). Two current priority areas identified for further development include (i) supporting individuals to find and/or remain in employment and (ii) improve the quality and experience of the services users receive. The contribution of this study's findings to these priority areas is underscored by the well-recognised notion that good work contributes to good mental health. Consequently, being able to avail oneself of high-quality evidence based IAPT services should contribute to improved work outcomes. In comparison to findings from other studies where predictors of psychological wellbeing in work have usually been tangible and frequently out of the employee's control e.g. imposed work conditions, intrapersonal emotional intelligence is a psychological skill under the individual's control and could be harnessed to manage negative/stressful emotions in the workplace.

From a policy perspective, a useful implication of this study's findings is implementation of a programme of training in intrapersonal emotional intelligence techniques among doctors and nurses. Policy could be drawn to ensure that priority areas include teaching of carefully selected intrapersonal emotional intelligence techniques to ensure that they target enhancement of emotion regulation strategies, in particular cognitive reappraisal strategies. Examples of intrapersonal emotional intelligence techniques that could be taught include self-awareness (i.e. the ability to recognise one's moods and drives), self-regulation (the ability to control and redirect one's impulses appropriately), emotional self-control (developing discipline in managing and releasing difficult feelings), flexibility (developing the ability to be malleable emotionally and tolerate uncertainty well), motivation (developing drive and enthusiasm), achievement (thriving within large and often hierarchical healthcare systems) and resilience building (maintaining motivation despite challenges) (Gardner, 2011). Any policy requirement that stipulates the training in intrapersonal emotional intelligence techniques can

operate within a wider spectrum of psychological therapies programme which can be accessed by doctors and nurses. Evidence suggests that while facilitating this type of psychological training often brings obvious benefits to healthcare employers, such programmes are sadly not available in many NHS Hospital Trusts across the UK (Kinderman, Sellwood, & Tai, 2008). Again from a policy perspective therefore the therapeutic model being proposed from this study's findings can provide significant benefits not only in terms of clinicians health and wellbeing but also significant cost benefits to NHS Hospital budgets perhaps through reduction in sickness absence and attrition from the professions and with that loss of significant monetary investment in training these often highly skilled professionals. For success of such models however, it is also important that provision is made for adequately trained therapists to deliver the intervention. As with medically trained practitioners it is prudent that therapists who deliver training in intrapersonal emotional intelligence techniques themselves possess a range of competencies to do so. A distinction of course has to be drawn between possessing skills to deliver specialist competencies and having the skills to initially assess, formulate, and develop therapeutic when doctors or nurses initially present usually initially to occupational health clinics. Having the skills to assess, formulate and develop therapeutic interventions to be delivered may be better achieved by highly clinical psychologists or perhaps occupational physicians (BPS, 2001). That approach will also be consistent with application of psychological models in clinical practice and also with current approaches to workforce design adopted by the Adult IAPT services (DoH, 2018).

7.7 Limitations of the study

The use of a cross-sectional design meant that while this study was able to identify associations between explanatory and outcome variable, cause-effect conclusions could not be drawn. Additionally, a cross-sectional design only offers only a snapshot of the study population at a specific point in time. The possibility remains therefore that participant perceptions may change over time, perhaps because of changes in workplace circumstances and this may influence compassion satisfaction and compassion fatigue in future surveys. While the use self-completion questionnaires meant that access to many

participants was easily achieved, it also meant that only those who chose to respond actually did. The voluntary nature of participation meant that a degree of selection bias was inevitable. Another limitation relates to data collection wherein because several variables were measured simultaneously and data collected from the same source at the same time, the possibility of common-source bias could not be completely ruled out. However studies which have compared one-factor and multiple-factor models suggest however that common-source bias may not always impact significantly on results (Favero & Bullock, 2014). Regarding data collection, it was again difficult to ascertain the degree to which subjectivity influenced the responses provided to questionnaire items and how that might have impacted on findings. Additionally, because questionnaires required self-completion it was difficult to control the influence of any intervening variables in the workplace e.g. the political climate at a specific department or within the Hospital Trust at the time the study. In the data analysis (i.e. specifically during regression analysis), this study did not control for potential confounding factors including age, gender, years of clinical experience age, specialty area and number of hours worked. It is therefore not possible to state how that may have impacted on findings from the regression models. Nonetheless this study provides good representation in respect of the number of specialities from which participants responded, albeit that the single study location does limit generalisability of findings. Another limitation pertains to the gender balance in this study. The majority of the participants in this study were female and nurses. While this potentially limits generalisability, debate around this remains polarised. For example, while some researchers have emphasised the importance of studies aimed at single discipline professions, others have argued pragmatically for studies focusing on multidisciplinary teams. In this study the later approach was favoured because interventions which demonstrate efficacy in the work environment are usually functions of interactions and processes between many different team members.

The breath of emotion regulation strategies examined is another limitation in the study. Only cognitive reappraisal and expressive (emotional) suppression were investigated. It must be borne in mind that their true relationships to compassion satisfaction and fatigue are not static but likely to be cyclic and

dynamic. A possible reason being that doctors and nurses are routinely more inclined to engage emotion regulation strategies that naturally align with their personal predispositions and which are continuously influenced by positive and negative experiences within the workplace. Other limitations relate to the ProQOL measure wherein the construct, convergent and divergent validity of the measure has in recent years criticized. For example, the multi-trait and multi-method of convergent and divergent validity testing reported in earlier versions of the tool are no longer evident in the current version of the tool. In respect of the Susceptibility to Emotional Contagion Scale its relatively low Cronbach alpha score of .65 in this study was rather disappointing. Possible reasons for a low alpha score may have included items not assessing a unidimensional construct or perhaps because of the relatively few numbers of items within the scale. Unidimensionality is important because it suggests that items in a tool measure a single latent trait or construct as they should. If that does not hold, then the concept of reliability which assumes that unidimensionality exists in a sample of test items is likely to be violated, resulting in underestimation of reliability. Finally, because this area of study is still relatively new and evolving, it was difficult to compare our findings to prior studies therefore somewhat limiting the scope and breath of discussion in this thesis. Notwithstanding these limitations, this exploratory study has reported useful data on predictive relationships observed between cognitive reappraisal, intrapersonal emotional intelligence, compassion satisfaction and compassion fatigue, contributing to the sparse body of existing knowledge in this area of research.

7.8 Future research directions

Future research directions could firstly involve testing novel methods of delivering intrapersonal emotional intelligence techniques/skills to doctors and nurses. Competences such as self-awareness, self-regulation and emotional self-control could be delivered using imagined interactions techniques which are based on Imagined Interaction Theory of Intrapersonal Communication. Imagined interactions will offer an innovative method of bridging the gap between identifying the target variable of intrapersonal emotional intelligence and incorporating it through training into doctors and nurses routine

emotion processing behaviours within clinical settings. The Imagined interaction approach has the unique advantage of offering doctors and nurses the opportunity to engage in cognitive representations of conversations experienced as internal dialogues before applying them in routine clinical interpersonal discourses with their patients. The Imagined Interactions approach has to be associated with past, future, or actual experiences, thereby distinguishing them from fantasies. Doctors and nurses may therefore be able to rehearse a variety of cognitive interpretations and associated behaviours including anticipating responses and selecting the most effective responses for specific clinical settings. Secondly, given that this study was cross-sectional and focused on qualified doctors and nurses, future studies could consider examining how intrapersonal emotional intelligence predicts compassion satisfaction and compassion fatigue in other categories of healthcare professionals e.g. physiotherapists etc, so that findings can be compared. Regarding future model testing, it is recommended that consideration is given to investigating how controlling for potential confounding variables like demographic variables e.g. age, gender, years of clinical experience etc impacts on models. The use of experimental designs will also be useful in increasing internal and external validity of future studies. Multicentre studies will be required to help examine significant relationships reported in this study in larger and more diverse populations. Finally, studies are required to examine the effects of development of intrapersonal emotional intelligence competencies in doctors and nurses and what effect that has on patient safety and quality of care.

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Appendix

1.0 Study Questionnaire

Please answer the following questions as they relate to you:

Part 1:

I have direct patient contact: Yes ____ No _____
Occupation: _____
Gender: _____
Age: _____
I have been qualified for (e.g. months/years): _____
My speciality area is (e.g. medicine/surgery/radiology): _____
I have worked in my specialty area for (e.g. months/years): _____
Number of hours worked per week: _____

Part 2

The Susceptibility to Emotional Contagion Scale

Please score the next few statements from strongly disagree to strongly agree

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I often find that I can remain cool in spite of excitement around me.					
I am able to remain calm even though those around me worry					
I cannot continue to feel okay if people around me are depressed.					
I become nervous if others around me seem to be nervous.					
The people around me have a great influence on my moods.					

The Short Profile of Emotional Competence

Please score the next few statements from never to very often.

Statement	Never	Rarely	Sometimes	Often	Very often
I am good at describing my feelings.					
I do not always understand why I respond in the way I do.					
I find it difficult to explain my feelings to others, even if I want to.					
I find it difficult to listen to people who are complaining.					
My emotions inform me about changes I should make in my life					
I am good at sensing what others are feeling.					
Most of the time, I understand why other people feel the way they do.					
When I am angry, I find it easy to calm myself down.					
If someone came to me in tears, I would not know what to do.					
When I am touched by something, I immediately know what I feel.					
If I wanted, I could easily make someone feel uneasy.					
Quite often I am not aware of people's emotional state.					
I can easily get what I want from others.					
I never base my personal life choices on my emotions.					
When I see someone who is stressed or anxious, I can easily calm them down.					
I do not understand why the people around me respond the way they do.					
Other people tend to confide in me about personal issues.					
I find it difficult to handle my emotions.					
When I am feeling low, I easily make a link between my feelings and a situation that affected me.					
When I feel good, I can easily tell whether it is due to being proud of myself, happy or relaxed.					

Part 2A:

The Compassion Satisfaction & Fatigue Subscale of the Professional Quality of Life Scale

Please score the next few statements on how frequently you have experienced them in the last 30 days.

Statement	Never	Rarely	Sometimes	Often	Very often
I get satisfaction from being able to help people.					
I am happy.					
I am the person I always wanted to be.					
I feel invigorated after working with those I help.					
I am happy that I chose to do this work.					
I feel trapped by my job as a helper.					
I feel bogged down by the system.					
I have beliefs that sustain me.					
I am pleased with how I am able to keep up with helping techniques and protocols.					
I like my work as a helper.					
My work makes me feel satisfied.					
I feel worn out because of my work as a helper.					
I have happy thoughts and feelings about those I help and how I could help them.					
I feel overwhelmed because my casework/caseload seems endless.					
I believe I can make a difference through my work.					
I am proud of what I can do to help.					
I feel connected to others.					
I have thoughts that I am a success as a helper.					
I am a very caring person.					
I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.					

Part 2B:

The Emotion Regulation Scale

Please score the few statements with scores ranging from 1 to 7.

1	2	3	4	5	6	7	***Score***
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree	
Statement							
When I want to feel more positive emotions (e.g. such as joy or amusement), I change what I am thinking about.							
I keep my emotions to myself.							
When I want to feel less negative emotions (e.g. such as sadness or anger), I change what I am thinking about.							
When I am feeling positive emotions, I am careful not to express them.							
When I am faced with a stressful situation, I make myself think about it in a way that helps me stay calm.							
I control my emotions by not expressing them.							
When I want to feel more positive emotions, I change the way I am thinking about the situation.							
I control my emotions by changing the way I think about the situation I am in.							
When I am feeling negative emotions, I make sure not to express them.							
When I want to feel less negative emotions, I change the way I am thinking about the situation.							

The Cognitive Fusion Scale

Please score the next few statements from never true to always true

Statement	**Score**
My thoughts cause me distress or emotional pain	
I get so caught up in my thoughts that I am unable to do the things that I most want to do	
I over-analyze situations to the point where it's unhelpful to me	
I struggle with my thoughts	
I get upset with myself for having certain thoughts	
I tend to get very entangled in my thoughts	
It's such a struggle to let go of upsetting thoughts even when I know that letting go would be helpful	

1	2	3	4	5	6	7
Never true	Very seldom true	Seldom true	Sometimes true	Frequently true	Almost always true	Always true

Part 2C:

1. What is the most enjoyable aspect of your role? _____
2. What is the least enjoyable aspect of your role? _____

Thank you

2.0 Participant Information Sheet

My name is Dr Gordon Jackson-Koku. I am a Specialty Registrar in Occupational Medicine at Addenbrooke's Hospital in Cambridge. I am conducting this research as part of a Ph.D. Programme at the Division of Health Research, Lancaster University, United Kingdom.

What is the study about?

The purpose of this study is to explore the role of emotions in compassion satisfaction among doctors and nurses across multiple specialties within an hospital-based setting. The aim of this study is to explore the role of emotions in compassion satisfaction among doctors and nurses. Compassion satisfaction is the positive aspect of the professional quality of life of doctors, nurses, midwives and other healthcare professionals. It includes the pleasure, benefit and satisfaction derived by healthcare professionals when they help others. Compassion satisfaction also includes finding meaning in one's efforts and experiencing positive collegiate support. The negative aspect of professional quality of life is known as Compassion Fatigue.

Why have I been approached?

You have been approached because the study requires information from people who are currently working either as a doctor or nurse.

Do I have to take part?

No. It's completely up to you to decide whether you take part.

What will I be asked to do if I take part?

If you decide you would like to take part, you would be asked to complete a short questionnaire that will take approximately 13 minutes.

Will my data be Identifiable?

The information you provide is anonymous and confidential. Information from your questionnaire will be pooled with other participants' information when reporting results or in any publications.

The data collected for this study will be stored securely and only the researchers conducting this study will have access to this data:

- Following completion of the study, an anonymised database of questionnaire contents will be uploaded onto the Lancaster University H-drive (via the Virtual Private Network). The anonymised database of questionnaire contents will be kept for 10 years, after the study is completed and then destroyed.

- All files held on computer will be encrypted (i.e.) no one, other than the research team will be able to access them. The computer itself is password protected. Files will be kept for 10 years and the destroyed.

What will happen to the results?

The results will be summarised and reported in a thesis which will be submitted to Lancaster University and may also be submitted for publication.

Are there any risks?
There are no risks anticipated with participating in this study. However, if you experience any distress following participation you are encouraged to inform the researcher and contact the resources provided at the end of this sheet.

Are there any benefits to taking part?
Although you may find participating interesting, there are no direct/immediate benefits in taking part.

Who has reviewed the project?
This study has been reviewed by the Faculty of Health and Medicine Research Ethics Committee and approved by Lancaster University Research Ethics Committee. The study also has NHS Health Research Authority Approval.

Where can I obtain further information about the study if I need it?
If you have any questions about the study, please contact:

The Chief Investigator:
Dr Gordon Jackson-koku (Specialty Registrar in Occupational Medicine)
Cambridge University Hospitals NHS Trust
Cambridge Health at Work
Addenbrooke's Hospital - Cambridge
CB2 0QQ
Email: g.jackson-koku@lancaster.ac.uk or g.jackson-koku@nhs.net
Tel: 01223 216767

Complaints
If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:
Dr Mark Limmer (Director of Blended Learning PhD programme (Years 3+)
Faculty of Health and Medicine
Division of Health Research
Lancaster University
Lancaster, LA1 4YG.
Email: m.limmer@lancaster.ac.uk
Tel: +44 (0)1524 593308

If you wish to speak to someone outside of the Division of Health Research Doctoral Programme, you may contact:

Professor Roger Pickup
Chair - Faculty of Health and Medicine Research Ethics Committee
Faculty of Health and Medicine
(Division of Biomedical and Life Sciences)
Lancaster University
Lancaster
LA1 4YG
Email: r.pickup@lancaster.ac.uk

Tel: +44 (0)1524 593746

Resources in the event of distress:

Should you feel distressed a result of taking part, the following resources may be of assistance:

- The Trust's Care First Employee Assistance Programme on telephone number 0800 174319.
- Care first is a confidential service for information and advice or counselling available to you free of charge.
- Calls to Care first are voluntary and you decide when and if you want to use the service. The service is available 24 hours a day, 365 days of the year. Your call will be answered by a qualified professional counsellor in confidence and there is no limit to how many times you can contact them. All counsellors are members of and accredited to the British Association for counselling and Psychotherapy (BACP), with significant experience in supervised clinical settings.

Thank you for taking the time to read this information sheet.

3.0 Participant Consent Form

I am inviting you to participate in a research project exploring the role of emotions in compassion satisfaction among doctors and nurses. Compassion satisfaction is the positive aspect of the professional quality of life of healthcare professionals. Before you consent to participate in this study I ask that you kindly read the Participant Information Sheet and Cover Sheet and complete the questionnaire to indicate your consent, if you wish to participate.

1. I confirm that I have read the information sheets and fully understand what is expected of me within this study.
2. I confirm that I have been given the opportunity to ask any questions and to have them answered.
3. I understand that data from my questionnaire will anonymised when collected and transcribed.
4. I understand that the anonymised data from my questionnaire will be kept until the research project has been examined.
5. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
6. I understand that once I have completed and submitted the questionnaire my data cannot be retrieved because questionnaires have been anonymised.
7. I understand that anonymised information from my questionnaire will be pooled with other anonymised participants' responses, and findings may be published.
8. I consent to anonymised information from my questionnaire being used in reports, conferences and training events.
9. I understand that any information I give will remain strictly confidential and anonymous. Where it is thought that there is a risk of harm to me or others, the Chief Investigator may need to share the anonymised information with his research supervisor.
10. I consent to Lancaster University keeping the anonymised data for 10 years after the study has finished.

I give my consent to participate in this study by proceeding to complete the survey questionnaire.

Thank you

4.0 Letter of invitation to participate in this study

Dear Colleague,

I am writing to ask for your assistance and participation in a study investigating compassion satisfaction in doctors and nurses.

The aim of the study is to explore the role of emotions in compassion satisfaction among doctors and nurses across multiple specialties within a hospital-based setting.

Compassion satisfaction is the positive aspect of the professional quality of life of doctors and nurses. The negative aspect is known as Compassion Fatigue.

This study is part of a Ph.D. project and your participation will involve completing a short questionnaire of approximately 5-10 minutes. All information you provide in the questionnaire is completely anonymous.

I have enclosed a Participant Information Sheet, a Cover Sheet and a Consent Form for your perusal before you decide whether to complete the questionnaire. I am aware of the pressures of your time, but your participation will be extremely appreciated.

I will be happy to discuss any questions you may have about the study. Please find my contact details below.
Thank you.

Dr Gordon Jackson-koku (Specialty Registrar in Occupational Medicine)
Cambridge University Hospitals NHS Trust
Cambridge Health at Work
Addenbrooke's Hospital
Cambridge
CB2 0QQ
Tel: 01223 216767, Email: g.jackson-koku@lancaster.ac.uk or g.jackson-koku@nhs.net

5.0 Cover letter sent with email invitation (consented participants)

Dear Colleague,

The role of emotions in compassion satisfaction among doctors and nurses

Thank you for agreeing to participate in this voluntary survey which is part of a PhD research project. The participant information sheet and consent form are available in the attachment for your perusal.

The aim of this study is to explore the role of emotions in compassion satisfaction among doctors and nurses. Compassion satisfaction is the positive aspect of the professional quality of life of doctors, nurses, midwives and other healthcare professionals.

Information you provide in the questionnaire will anonymous and confidential. It will be pooled with other participants' responses, making it unidentifiable and used for research purposes only. The anonymous information you provide will not be shared with other organizations. Only the research team will have access to the data collected.

The questionnaire will take about 5-10 minutes to complete and findings may be published. The anonymous information collected will be encrypted and held securely in a password protected computer in accordance with Data Protection Act 1998. Data will be kept by Lancaster University for 10 years after the study is completed.

This study has been reviewed by the Faculty of Health & Medicine Research Ethics Committee and approved by Lancaster University Research Ethics Committee. The study also has NHS Health Research Authority Approval.

By completing the questionnaire through clicking the link below, you are consenting to take part in this voluntary study. Withdrawal after questionnaire completion is not possible because questionnaires have been anonymised and it is not possible to trace individual data. You may receive this questionnaire once more, but please complete it only once.

Please click this link to complete the anonymous questionnaire survey:
https://eu.qualtrics.com/SE/?SID=SV_3DlUNhN8iBUcyRD

If you have any questions about this study, please contact:
Dr Gordon Jackson-koku (Specialty Registrar in Occupational Medicine)
Cambridge University Hospitals NHS Trust
Cambridge Health at Work
Addenbrooke's Hospital
CB2 0QQ
Tel: 01223 216767
Email: g.jackson-koku@lancaster.ac.uk or g.jackson-koku@nhs.net

6.0 Capacity and Confirmation

Cambridge University Hospitals
NHS Foundation Trust

Research and Development Department

R&D ref: A094367

Box 277
Addenbrooke's
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CB2 OQQ

Direct Dial: 01223 349321 Ext 59321
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Dr Gordon Jackson-Koku
Occupational Health SpR
Cambridge Health at Work
Cambridge University Hospitals NHS FT
Addenbrooke's Hospital
Cambridge
CB2 OQQ

16th February 2017

Dear Dr Gordon Jackson-Koku

IRAS ID: 213196
Caring for the caregivers: The role of emotions in compassion satisfaction among doctors and nurses

Thank you for sending details of the above-named study.

The R&D department has received the HRA Approval letter and reviewed the study documents. The project has been allocated the internal R&D reference number of **A094367.** Please quote this in all future correspondence regarding this study.

Capacity and capability to conduct this study at Cambridge University Hospitals NHS Foundation Trust is confirmed. Recruitment can commence at this site from the date of this letter.

We would like to take this opportunity to remind you of your responsibilities under the terms of the Research Governance Framework for Researchers, Chief Investigators, Principal Investigators and Research Sponsors and to also of the requirement to notify R&D of any amendments or changes made to this study.

You will be aware that the Trust is subject to national reporting requirements for first patient recruitment within 70 days. Further details on this can be found on the NIHR website:
http://www.nihr.ac.ukiresearch-and-impactinhs-research-performance/performance-in-initiating-and-delivering-research/
If you have any questions or concerns about this, please contact me.

I wish you every success with this study.

Yours sincerely

ockley

Louise Stockley
Research Governance Manager

7.0 HRA Approval letter

Health Research Authority

Dr Gordon Jackson-Koku
105 Sycamore Road
Rochester
Kent ME2 2PH

Email: hra.approval@nhs.net

10 January 2017

Dear Dr Jackson-Koku

Letter of HRA Approval

Study title:	**Caring for the caregivers: The role of emotions in compassion satisfaction among doctors and nurses.**
IRAS project ID:	**213196**
REC reference:	**17/HRA/0010**
Sponsor	**Lancaster University**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

8.0 Ethics Approval Letter

Applicant: Gordon Jackson-Koku
Supervisor: Ian Fletcher
Department: Health Research
FHMREC Reference: FHMREC16017

22 November 2016

Dear Gordon

Re: Role of emotions in compassion satisfaction among doctors and nurses

Thank you for submitting your research ethics application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for this research project.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Tel:- 01542 592838
Email:- fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

Dr Diane Hopkins
Research Integrity and Governance Officer, Secretary to FHMREC

9.0 Sponsorship letters

Applicant name: Gordon Jackson-Koku
Supervisor: Ian Fletcher
Department: Health Research

5 December 2016

Dear Gordon

Re: Role of emotions in compassion satisfaction among doctors and nurses

The University of Lancaster undertakes to perform the role of sponsor in the matter of the work described in the accompanying grant application. As sponsor we assume responsibility for monitoring and enforcement of research governance. As principal investigator you will confirm that the institution's obligations are met by ensuring that, before the research commences and during the full term of the grant, all the necessary legal and regulatory requirements are met in order to conduct the research, and all the necessary licenses and approvals have been obtained. The Institution has in place formal procedures for managing the process for obtaining any necessary or appropriate ethical approval for this grant. Full ethical approval must be in place before the research commences and should be reviewed at all relevant times during the grant.

Yours sincerely,

PP Professor Roger Pickup
Associate Dean for Research
Chair Faculty of Health and Medicine Research Ethics Committee.

CC Dr Diane Hopkins, Secretary to FHMREC

ZURICH
MUNICIPAL

To Whom It May Concern

Our ref: MD/FEHE 1 August, 2016

Zurich Municipal Customer: Lancaster University

This is to confirm that Lancaster University has with this company until the policy expiry on 31" July 2017 Professional Negligence Insurance incorporating the following essential features:

Policy Number: NHE-07CA04-0013

Services covered: Training, Research and Consultancy

Limit of Indemnity: £5,000,000 any one claim and *in the aggregate for all claims* first made against the Insured and notified to Zurich Municipal during the period of insurance

Excess : Research (Sc Consultancy: £5,000 any one claim
Training: £500 any one claim

Retroactive Date: 01 August 2008

Exclusions
Standard insurance market exclusions apply, notably exclusion of Pollution other than sudden and accidental; punitive or exemplary damages; express warranties or guarantees; claims the cause of which occurred prior to the Retroactive Date.

This is a brief summary and the fill policy should always be referred to for exact details of cover.

Yours faithfully

AL,

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10.0: Independent samples t-tests of doctors' and nurses' scores of predictor variables on dependent variables

Variable	Occupation	*N*	*M*	*SD*	*F*	*df*	*p*	Skew	Kurtosis
Compassion Satisfaction	Doctor	119	39.03	5.82	.23	451	.384	-.399	.127
	Nurse	334	39.57	5.77					
Compassion fatigue	Doctor	119	25.93	5.95	1.75	451	.235	.073	.009
	Nurse	334	25.23	5.37					
Emotional Contagion	Doctor	119	16.42	1.91	3.99	466	.430	.014	.432
	Nurse	349	16.00	2.15					
Intrapersonal E.I	Doctor	113	34.81	4.67	4.69	415	.112	-.408	1.260
	Nurse	304	34.11	3.74					
Interpersonal E.I	Doctor	113	35.5	4.21	.021	415	.013*	-.296	.975
	Nurse	304	34.4	3.89					
Cognitive Reappraisal	Doctor	116	4.67	1.04	5.98	428	.065	-1.005	2.001
	Nurse	314	4.85	.84					
Expressive Suppression	Doctor	116	3.77	.11	3.05	428	.367	-.035	-.396
	Nurse	314	3.88	.06					

Key: * = $p \leq .05$, *N* Number of participants, (*SD*) Standard deviation, *M* Mean, *F* Levene's Test, *df* Degrees of freedom, *p* P value, *E.I Emotional Intelligence*

11.0: One-way analysis of variance (ANOVA) test of predictor variables on speciality areas

Variable		*N*	*M*	*SD*	*Skew*	*Kurtosis*
Compassion Satisfaction						
	medicine	234	39.60	6.05	.159	.317
	surgery	116	39.33	5.56	.225	.446
	others	107	39.75	5.33	.234	.463
	Total	457	39.56	5.76		
Compassion fatigue						
	medicine	234	25.44	5.74	.159	.317
	surgery	116	24.87	5.09	.225	.446
	others	107	25.39	5.48	.234	.463
	Total	457	25.28	5.51		
Emotional Contagion						
	medicine	241	16.59	2.24	.159	.317
	surgery	122	16.62	2.03	.225	.446
	others	109	16.32	1.81	.234	.463
	Total	472	16.53	2.09		
Intrapersonal EC						
	medicine	211	34.44	3.81	.159	.317
	surgery	110	34.55	4.19	.225	.446
	others	100	34.11	4.38	.234	.463
	Total	421	34.39	4.05		
Interpersonal EC						
	medicine	211	34.92	3.84	.159	.317
	surgery	110	34.87	4.26	.225	.446
	others	100	34.48	4.13	.234	.463
	Total	421	34.81	4.02		
Cognitive Reappraisal						
	medicine	218	4.89	.85	.159	.317
	surgery	112	4.73	.97	.225	.446
	others	104	4.74	.91	.234	.463
	Total	434	4.81	.90		
Expressive Suppression						
	medicine	218	3.82	1.16	.159	.317
	surgery	112	3.81	1.12	.225	.446
	others	104	3.86	1.18	.234	.463
	Total	434	3.83	1.15		

Key: (N) Number of participants, (SD) Standard deviation, (M) Mean

11: One-way analysis of variance (ANOVA) test of predictor variables on speciality areas

Variable Source	*df*	*SS*	*MS*	*F*	*p*
Compassion Satisfaction					
Between Groups	2	10.36	5.18	.156	.856
Within Groups	454	15123.97	33.31		
Total	456	15134.34			
Compassion fatigue					
Between Groups	2	26.78	13.39	.439	.645
Within Groups	454	13856.23	30.52		
Total	456	13883.02			
Emotional Contagion					
Between Groups	2	6.53	3.26	.741	.477
Within Groups	469	2068.92	4.41		
Total	471	2075.45			
Intrapersonal EC					
Between Groups	2	11.04	5.52	.335	.715
Within Groups	418	6881.07	16.46		
Total	420	6892.11			
Interpersonal EC					
Between Groups	2	14.06	7.03	.433	.649
Within Groups	418	6781.96	16.22		
Total	420	6796.02			
Cognitive Reappraisal					
Between Groups	2	2.47	1.24	1.524	.219
Within Groups	431	350.67	.81		
Total	433	353.15			
Expressive Suppression					
Between Groups	2	.119	.05	.044	.957
Within Groups	431	578.03	1.34		
Total	433	578.15			

N Number of participants, (SS) Sum of Squares, MS Mean Square, F Levene's Test, df Degrees of freedom, p P value

12.0 - Open ended question: Q1 - "What the most enjoyable aspect of your role" – Theme codes

Theme	Theme Codes	Frequency Count	Percentage (%)
Contact Families	fc	3	21.95
Team working	Tw	33	0.73
Satisfaction with patient/job	S	49	8.05
Patient contact	pcon	50	25.12
Patient care	pc	82	12.2
Making a difference	md	90	20
Other reasons (Role variety/solving problems/helping/self-development)	v	103	11.95
Total		**410**	**100%**

"What the most enjoyable aspect of your role" – Theme codes and Response labels

What is the most enjoyable aspect of your role?	Response labels from themes
working with families	fc
When a patients say I have helped them through a difficult time	fc
when i am with my children back home from the Philippines	fc

What is the most enjoyable aspect of your role?	Response labels from themes
Making a difference to patient care	md
seeing patients get well, people saying thankyou and positive feedback	md
being able to help people	md
helping others whether it is staff or patients and families	md
making patients feel good	md
meeting and helping many different people	md
Helping patients get better	md
Being there for the patient ay the lowest and happiest of times. Being a strong advocate for that child. Communicating in a compassionate and thought =ful manner. Caring.	md
Combining doing the job with teaching and mentoring	md
people saying Thank You	md
understanding what it is that the patient really wants and enabling them to express it	md
Thankful patient and relative,s making a different in someones life	md
caring for patients and making a difference	md
When someone visibly recovers from their injuries helped by me.	md
Seeing people get better	md
Seeing a patient walk out after a life threatenng injury	md
working within a team, working closely together has plus side to help get through the workload and caring for patients	md
seeing parents taking their babies home	md
caring for ill patients, positive feedback from relatives/patients/manager	md
Being able to help people in need	md

When a patient starts improving	md
Solving important problems that affect the quality of life of my patients	md
improving quality of life for others	md
making people better.	md
Being in charge of making decisions and helping people.	md
to help people	md
Making a difference	md
doing a good job	md
discharging patients when they are well	md
Making a difference	md
saving lives	md
good outcomes	md
saving lives	md
Making a difference to patient's experience	md
FEEL AND KNOW I AM DOING SOMETHING GOOD FOR OTHERS	md
I can make a difference for the people I treat	md
Making a difference, seeing people get better.	md
immediate feedback from the patients that they they feel good and are pain free after my anaesthetic	md
improving services to give excellent care	md
When patients going home remembers how I cared sbout them	md
making people feel better	md
improving the quality of life for patients	md
I can make a positive difference to other people's lives	md
Relieving patient's of their symptoms	md
helping people to make their life tolerable	md
helping patients live well	md
	md
Making a difference (even just making a patient smile)	md
feeling I have made a difference to someone's experience	md
Being able to see a patient walk off the ward after they have had life changing injuries - i.e RTC	md
helping and making a differnce	md

long term nurse patient relationship and knowing that I can make a difference	md
Seeing patients do well after my treatment	md
Helping pts and seeing pt improve	md
surgery	md
Knowing the treatments I put in place generally have an impact on patient care.	md
being able to make a difference	md
having happy patients	md
seeing my patients being discharged fro, hospital	md
making a difference	md
the instant fix of surgery on patients wellbeing	md
helping women feel positive about themselves as mothers-to-be or as mothers	md
Diagnostics	md
making difference in patient's life	md
seeing people get better and being discharged from ICU	md
Making an impact	md
Making a difference in someone's life	md
meeting people and finding solutions	md
making a difference	md
making a difference to patient	md
patient care and contact- being able to make a difference	md
doing little extra's for patients to go the extra mile	md
Making a difference to the patient and families experience.	md
Making a difference to patients' lives	md
making a difference no matter how small	md
when I feel i have made a difference to a patient / team member	md
Being kind and considerate to my patients and staff. Occasionally feeling like I have done something that may have been beneficial or made a difference to a patient.	md
making a difference to otehrs	md
being able to make a difference	md
Changing life's for the better	md
making a difference to family's lives	md

knowing you have made a difference	md
Making improvements to patient care and processes	md
making a differece to a patient	md
Making a difference	md
making someone better	md
Making a difference to a patient or family member	md
being able to make a difference	md
Knowing that I've done a good job and made a difference	md
knowing i made a difference	md

What is the most enjoyable aspect of your role?	**Response labels from themes**
	nr
working with people	nr
	nr
	nr
don't know	nr
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	nr
Leaving for home	nr
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Useful	nr
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DIY	nr
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My family	nr
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all	nr
payday	nr
time management	nr
	nr
	nr
	nr
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	nr
As a mom and a friend	nr
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	nr

What is the most enjoyable aspect of your role?	Response labels from themes
patient care	pc
Contributing to something bigger, and more important, than myself.	pc
Caring patients nad communication with colleaugues	pc
Physical interaction with my patient and supporting the parents.	pc
caring for people	pc
hands on care for the patients and relatives and having the time to give them quality care	pc
Patient and their family care, making a difference	pc
helping patients feel at ease	pc
treating patients	pc
caring caring for people around me	pc
Treating people	pc
caring of the patients	pc
patient care	pc
patient care	pc
Patients	pc
Shared decision making with patient	pc
Patients	pc
supporting mums in labour	pc
patient contact	pc
Patient care	pc
Patients	pc
patients and pay	pc
direct patient care	pc
patient care	pc
Patient contact	pc
Hands on care being with patients	pc
seeing parents take their babies home	pc
patient contact	pc
helping the patients	pc
helping a patient to have a positive experience	pc

Patient contact	pc
Assessment and treatment of patients	pc
looking after people	pc
Patient care, making their treatment as easy and relaxed as possible	pc
Patient care	pc
providing good patient care	pc
Care	pc
pt care and teaching	pc
care advise i give to patients	pc
patient contact	pc
contact with patients	pc
patient care	pc
Patient care	pc
patient care	pc
patient contact, supportive team	pc
Caring for the patients	pc
patients	pc
treating people	pc
being able to give one to one care	pc
giving a wash to a very ill patient	pc
Caring for sick babies and their families	pc
Patient care	pc
caring for people	pc
Patient contact	pc
giving good care	pc
Caring	pc
patients	pc
Putting the patient first	pc
patients	pc
Patient care and team working	pc
patient care	pc

Patient care	pc
Patient Contact	pc
Patient contact and teamwork	pc
Caring and being useful	pc
Caring for women	pc
Caring for my patients at the bed side	pc
Caring and role model to everyone	pc
Patient contact	pc
caring for patients	pc
being in the caring job	pc
taking care of patient and when they get better and go home .	pc
caring for patients	pc
caring	pc
the patients	pc
caring for patients	pc
patient contact	pc
treating elderly patients	pc
Patients - holistic care	pc
patients	pc
caring for others	pc
direct patient care	pc

What is the most enjoyable aspect of your role?	Response labels from themes
people contact and assisting people with their needs	pCon
patient contact	pCon
patient contact	pCon
Patient contact	pCon
Patient Contact	pCon
Patient interactions	pCon
I enjoy helping families, forming trusting relationships, feeling appreciated by them.	pCon
The relationship with staff, pt's and visitors	pcon
Interaction with people and helping	pcon
working with people	pcon
Having good relation and rapport with work colleagues and also getting good and postive feedback from patients and their relatives.	pcon
Getting thanks from patients and recognition from colleagues for outstanding work	pcon
caring for others	pcon
Patient Contact	pcon
CONTACT WITH SO MANY DIFFERENT PEOPLE	pcon
Interactions with people	pcon
interaction with babies and parents	pcon
Clinics	pcon
working with people	pcon
Getting to know my Patients as a person	pcon
Getting close emotional contact with patients and coworkers	pcon
Taking care of patients at their darkest time - getting to know families.	pcon
interacting with the patients	pcon
cancer patient contact	pcon
working with patients	pcon
Meeting patients	pcon
Patient contact	pcon
Patient contact	pcon
talking to patients	pcon

helping patients/patient relationships & communication	pcon
patients and families	pcon
Seeing ad Assessing patients in Emergency Dept and ensuring they get best care	pcon
Contact with famiilies	pcon
family contact	pcon
People	pcon
speak with people	pcon
working with the fun and nice people	pcon
Patient contact	pcon
Pt feedback	pcon
interaction with patients and colleagues	pcon
patient contact	pcon
clinical interactions	pcon
contact with my patients, smile I put on their faces, every day is different, every day I can make a difference	pcon
contact with families	pcon
nurse/patient relationships	pcon
patient contact	pcon
treating and connecting with patients and their families so that events are expected	pcon
developing relationships with patients	pcon
people: patients, families, other team members	pcon
working with families	pcon

What is the most enjoyable aspect of your role?	Response labels from themes
Satisfaction at a job well done	s
Time spent doing clinical work that is not with direct patient contact	s
patient satisfaction and teaching	s
patient satisfaction and my job satisfaction	s
diversity of role	s
seeing the change in others and mentoring staff	s
being a doctor	s
teaching and mentoring staff	s
helping and teaching people	s
Nursing	s
Time spent with family and friends	s
being busy and productive	s
To be able to touch patients' lives in my own little way from birth to womb	s
teaching	s
Diversity and challenge	s
nursing care	s
when i received a positive feedback/compliments from my patients	s
appreciation from others	s
patient satisfaction	s
AS a PD nurse I love seeing people reach their full potential	s
being a nurse	s
Technical skills	s
on going clinical training and learning and patient contact/clinical assessment	s
The autonomy	s
Clinics	s
when someone says thank you	s
Being able to do the job to the best of my ability.	s
The satisfaction of helping	s

job satisfaction	s
sharing good practice	s
The challenge - changes every day	s
Clinical satisfaction	s
simple thank you from my patients, and colleagues. respect I get from people and very often love	s
The fast paced decision making	s
to have a good day at work and the patients and staff safety	s
Having your work valued, meeting new people	s
Positive outcome and being able to provide high level care despite tough situations e.g. staff shortages, everyday pressures	s
diversity ,Leadership	s
when people appreciate the work	s
completing a diffciult task	s
pt satisfaction	s
Clinical practice	s
patient is happy with my care i gave	s
educating others	s
Reassuring people	s
Teaching and mentoring	s
Responsibility	s
happy patients	s
Clinical work	s

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What is the most enjoyable aspect of your role?	Response labels from themes
managing staff	tw
flexibility	tw
The people I work with	tw
Working with colleagues, seeing patients	tw
teamwork	tw
Clinical care. Working with a good team. Problem solving.	tw
Seeing people get better, knowing that you've helped them	tw
Being part of a team ,my work colleugues and ward work ethic	tw
Co-production work with patients	tw
working with a good team. direct patient care with support	tw
team working with great collegues	tw
working as a team (multidisciplinary roles and even down to the cleaner)	tw
The social network	tw
Teamworking with my colleagues	tw
team work	tw
good team work	tw
Working within a team and communicating with a range of people	tw
Be part of a team	tw
The people I work with	tw
teamwork	tw
being part of a great team	tw
collegues	tw
who I work with	tw
talking with collegues	tw
Working as part of a team to improve patient care and outcomes	tw
the teamwork	tw
Being part of a team who makes a positivie difference	tw
team working	tw

working with patients and my team	tw
Leading a team of professionals working to make someone's life better	tw
teamwork and patient care	tw
working in a team, with people	tw
my work team	tw

What is the most enjoyable aspect of your role?	**Response labels from themes**
variety	v
solving problems	v
seeing people (staff) develop	v
Making people happy	v
Palliating suffering	v
Be able to help people	v
helping others	v
Seeing the difference that you make to often very unhappy people. The group of patients that I see have very senstitive and intimate problems, that have a huge impact on the quality of their life.	v
opertaing/surgery	v
the knowledge	v
caring	v
Helping people	v
troubleshooting situations	v
to feel the care I provide is helpful and my patients are happy with the care	v
Being a part of improving a patients well being	v
The people I work with and the people I look after	v
Helping people	v
Helping patients and others, flexibility in work arrangements	v
helping others	v
helping others	v
Being able to help and make a difference in people's lives.	v
helping others	v
helping a person survive	v

Seeing happy children	v
when I can alleviate or reduce a person's fear,pain etc. Close personal, professional relationships with my colleagues	v
Helping people	v
looking after the babies and families	v
Children having a positive experience of hopsital	v
Helping people die comfortably, helping their families to understand, helping people to have quality time together	v
Being able to translate 'medicine' into 'English'	v
Knowing that what we are doing will help people	v
Helping people recover	v
Helping people	v
Seeing patietns improve	v
the people I work with and the care we deliver to our patients	v
Palliating suffering and explaining disease processes	v
making a pt + their loved ones happy/comfortable + seeing the patient get better.	v
Helping others along their path in life	v
helping patients recover from their illness	v
helping others	v
Managing complex issues with acutely unwell pts	v
Seeing a patient get better, or even just a smile when they havent smiled for a few days.	v
See patient's recovery after injuries and helped them overcome their problems.	v
helping people	v
Caring for the babies and seeing their progress everyday	v
helping people	v
helping people	v
Making people better	v
finishing the items on my "to do" list before starting another	v
making a child feel safe/cope	v
helping others	v
nursing children	v
Making patients feel they cope with a situation or illness	v
Improving the quality of people's lives	v

Seeing my patients live better lives after a transplant	v
making people feel safe and looked after	v
Being helpful	v
Feeling good when I do something well.	v
Being able to help families at a very difficult time	v
suporting the child and family	v
Supporting children and families with their diagnosis	v
seeing patients recover	v
Helping people	v
helping patients recover and supporting families through the process	v
Being able to help others when they need	v
getting the correct diagnosis so that a patient can have optimal treatment	v
Working with patients and being in a great time of supportive colleagues	v
Helping patients get better	v
of being of service to others	v
Getting tjhe right answer for patients	v
productivity, helping otherers	v
using all my clinical and life skills to help with research to improbve treatment for brain injury patients	v
Helping for the wellness of patients	v
helping every one	v
Knowing that you can change someone's life for the better with certain treatments	v
Improving quality of life for others	v
when i see my neuro patient in the walking in the corridor looking much better	v
seeing patient progress	v
Resuscitation - stabilising incredibly sick people	v
Educating patients, giving them a greater understanding. Empowering patients.	v
To make ladies feel good about themselves	v
having the ability to help in difficult life circumstances	v
Being able to help others and grow personally and professionally	v
Knowing I have done my very best for my patients	v
Having skills to be useful in situations that affect the lives of other people rather than standing by feeling helpless	v

Helping people through stressful times in their lives and try and improve quality of life	v
always trying to make someone feel better	v
supporting others	v
Looking after elderly people	v
helping others makes me feel as if my existance is justified	v
putting atients and families at ease	v
traeting and talking to patients	v
helping patients and families in their journey	v
Helping people	v
The pace and constantly dynamic situation	v
every day is different	v
Easing suffering	v
Helping people and making a difference to people	v
seeing patient going home after having suffered from stroke!	v
Having the skills and ability to make a person rapidly better and provide comfort in a bad situation.	v
serving people	v
helping others	v
helping a woman give birth or breastfeed	v

13.0: Open ended question: Q2 - “What the least enjoyable aspect of your role” – Theme codes and Response labels

What is the least enjoyable aspect of your role?	Response labels from themes
paperwork	ad
data management	ad
bureaucracy and red tape in the nhs, lack of resurces to do our job	ad
admin	ad
load of admin I have as a manager,too much documentation in clinical care,not enough staff and not enough time to give the patients enough care.	ad
administration	ad
red tape	ad
Long days and paperwork	ad
keeping databases	ad
demands that i can see add no value	ad
protocol's, matrics, regulations, exhaustion	ad
documentation	ad
repetitive work, commitment and conscientiousness unrecognised and unrewarded	ad
Bureaucracy. Managing people who demonstrate a lack of commitment.	ad
hours on the computer filling in paper work that a data manager could do	ad
paper work	ad
red tape - being asked to do something that you know will make no difference	ad
when nobody reads the documentation you have painstakingly written	ad
meetings	ad
time spent on documentation	ad
paperwork	ad
Administration and relentless pressure	ad
Paperwork, long hours and office politics	ad
Dealing with the paperwork burocracy and having to keep chasing different elements of the team and to try to sort problems within the hospitals organization.	ad
bureaucracy	ad

admin	ad
paperwork, protocolisation and bureaucracy	ad
buracracy without insight or foresight.	ad
Administration of the box ticking kind	ad
Administration	ad
dealing with so many management issues	ad
admin	ad
pointless bureaucracy	ad
paperwork	ad
too much documentation and not enough time - feelings of being over worked and helpless	ad
Bureaucracy	ad
Bureaucracy and addressing poor management structures	ad
bewing non clinical - office work.	ad
Red tape	ad
Admin	ad
bureucracy	ad
admin	ad
Endless tick lists/form filling	ad
The beurocracy	ad
Paperwork	ad
Not being able to spend time with my patients because of the enourmous amount of computerised documentation required. "A Box ticked is a kindness forgone"	ad
Dealing with hospital bureaucracy	ad
Bureaucracy	ad
paperwork	ad
beurocracy, working in a failing system	ad
Large amounts of admin and documentation	ad
HNS management and bureaucracy	ad
Administration, finance and management meetings	ad
admin	ad

red tape	ad
The salary! not a well paid profession	ad
Breaking bad news. Duplication in paperwork and the time it takes. Staff in leadership roles who have few people/communication skills	ad
documentation	ad
paperwork and being over worked and under staffed	ad
Beaurocratic issues	ad
documentation	ad
the beurocracy and politics	ad
administrative duties	ad
admin, delay due to things out of my control	ad
Admin	ad

What is the least enjoyable aspect of your role?	**Response labels from themes**
poor work/life balance	Bw
Exhoustng staff	Bw
hours/ no work life balance and financially	Bw
Changes imposed that affect my work life balance, lack of sleep.	Bw
Work-life balance, particularly working nights and weekends	Bw
Lack of control over personal / social life / family life / rotations as a trainee	Bw
work/life balance. physical tiredness	Bw
Balancing 12 patients and all of there care. Also trying to balance a work - life balance	Bw
The demand of responsibility of both personal and work life.	BW
shift patterns, patients showing no gratitude	BW

What is the least enjoyable aspect of your role?	**Response labels from themes**
complaints	C
colleagues, complaining patients	C
grievances	C
compaining patients (rare but stressful)	C

parents complaining	C
complaines	c

What is the least enjoyable aspect of your role?	Response labels from themes
When a baby dies.	**De**
Death/Dying/End of Life	De
watching a gradual decline and death	De
End of life care	De
Watching pt deteriorate	De
Withdrawing life sustaining treatment and having difficult conversations with the families about this process.	De
deal with dead	De
pts passing away	De
looking after dying patient	De

What is the least enjoyable aspect of your role?	Response labels from themes
Long hours	ho
When there isn't enough time to do all the jobs that need doing.	ho
contraints of the nhs, not enough time to do all my work and managing challenging staff	ho
not having time to do it well	ho
Being too busy to effectively carry out my job role	ho
sometimes working with staff who constantly moan and therefore affect the whole team, time constraints when dealing with patients and issues surrounding equipment, dealing with things that are out of our control	ho
the long days shifts, so many hours per week.	ho
hours	ho
time	ho
Shifts, hours, workload...	HO
not always having the time with patients	ho
out of hours work	ho
long hours and low pay	ho

Doing long hours day and night	ho
short staff lack of time	ho
When we need to stay late when awaiting inpatient beds	ho
looking after people who are obstructive, manipulative and wasteful of treatment oppertunitlies	ho

What is the least enjoyable aspect of your role?	**Response labels from themes**
dealing with the IT system	IT
Staring at a computer screen	IT

What is the least enjoyable aspect of your role?	**Response labels from themes**
	Nr
	Nr
	Nr
	Nr
don't know	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
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	Nr
	Nr
	Nr
	Nr

	Nr
	Nr
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	Nr
	Nr
	Nr
	Nr
	Nr
N/A	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
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	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
admin	Nr
N/A	Nr
abuse from people	Nr
	Nr
	Nr

	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
	Nr
none	Nr
	Nr

What is the least enjoyable aspect of your role?	**Response labels from themes**
not being able to solve problems	Oth
managers, targets, the fact that NHS now has to think in data and cost rather than people.	Oth
NHS limitations	Oth
See peolple suffering	Oth
Interaction with unfriendly people	Oth
Dissatisfied relatives and staff unhappy with decisions made	Oth
	Oth
Barriers that stop me from doing my job to its best ie time	Oth
when breaking the badnews	Oth
Not receiving feedback on my performance, when I feel I have let someone down (colleagues, patients, families	Oth
none	Oth

Seeing people my age or younger with advanced cancers.ie breaking bad news	Oth
Seeing people die	Oth
Negative feedback to colleagues / patients	Oth
rude relatives and patients	Oth
working with people	Oth
financialy not very satisfied considering the long hours	Oth
When there are difficult situations and poor communication	Oth
people taking advantage of my skills and knowledge, when they need it. with getting nothing back.	Oth
the money	Oth
disrespect	Oth
Consultants altering the rota whithout discussing it first	Oth
people and their differences	Oth
Upset or angry relatives or patients	Oth
Dealing with unpleasant patients	Oth
Dealing with unhappy parents	Oth
When patients are unreasonable and do refuse the care they need or just try to be acward	Oth
complications	Oth
my salary	Oth
dealing with unhappy parents	Oth
time management	Oth
Giving difficult news	Oth
	Oth
when a patient's condition deteriorates. Dealing with very agitated, confused or aggressive patients.	Oth
No money	Oth
working in the NHS	Oth
Breaking bad news.	Oth
Surgical complications	Oth
Sleep deprivation	Oth
Exam revision!	Oth

seeing suffering which cannot be alleviated	Oth
EPIC	Oth
Failure	Oth
Extremely angry complaints / actively aggressive behaviour	Oth
the sad cases	Oth
Having to treat functional illness as medical due to national precedent	Oth
LOW SALARY :)	Oth
Clinics	Oth
Offering advice when asked but the advice then being ignored even though it is evidence based.	Oth
managing attitudes	Oth
none, i enjoyed most of my 34 years in nursing	Oth
Constant changes implementated that do not apply to neonatal services	Oth
the sound of the bleep	Oth
rude people	Oth
not getting the area (specialty) that I want	Oth
wages	Oth
Commuting	Oth
most of it	Oth
telling people bad news	Oth
dealing with demanding patients and relatives	Oth
physical enivronment	Oth
Being Unhelpful	Oth
Nothing	Oth
the expecations	Oth
breaking bad news	Oth
Being able to use all the academic theory with my years of experience to help people in the hospital and community deal with some very difficult ,complex situations.	Oth
I don't know	Oth
The verbal abuse given by relatives, patients and other colleagues	Oth
Commuting to and from work on the A14	Oth
not being able to help	Oth

none	Oth
I am underpaid!	Oth
unthankfull people	Oth
	Oth
disapointing a patient e.g. if i have to tell them a surgery is cancelled,	Oth
watcing families struggle	Oth
Management role	Oth
Witnessing emotional pain and unable to do anything about it.	Oth
pressure financially	Oth
evry other day	Oth
dealing with difficult pts/families who wont allow you to do your job	Oth
going above and beyond my role and not being appropriately financially rewarded for it!	Oth
when adoctor gives a news about a report to the patient	Oth
Driving	Oth
boredom/routine	Oth
dealing with children when its a trauma	Oth

What is the least enjoyable aspect of your role?	**Response labels from themes**
politics within department	p
Politics and organistional beurocracy. Targets and not been communicate with from a higher level. Assumptions that we are ok!!	p
Dealing with hospital politics and bureaucracy	p
hospital politics	p
politics and difficult personalities	p
Politics	p
Politics	p
dealing with the politics of hospital life	p
the rules and policies are endless	p
politics and paperwork	p
politics of the system	p
NHS politics	p

Politics	P
coping with all the politics	P
Politics - dealing with other healthcare professional and team instability	P
politics of health care	P
Politics	P
NHS Politics	P
politics and inequalities in management	P
politics in NHS and low morale	P
when there is not an improvement in the situation and the politics of the workplace	P
feeling powerless in an organisation (politics)	P
internal politics, lack of ability to progress	P
politics	P
politics of the NHS	P
office politics / ambitious, self-serving people	P
political interference and bureauocracy	P
politics at work	P
the politics	p
politics	p
Politics and pressured target meeting.	P

What is the least enjoyable aspect of your role?	**Response labels from themes**
seeing people get ill and not have effective treatment	Re
resources for on-going care	Re
Not being able to give what I think is right	Re
when not able to give the care i want eg staffing	Re
dealing with lack of resources, short staffing and politics	Re
responsibility beyond what I should have due to shortage of staff	Re
lack of staff	Re
Barriers (resourse) and blame culture	Re
Having 12 highly demanding patient who are awaiting other specialities or support for treatment that we are unable to provide e.g. mental health	Re

being unable to fulfil my role	Re
lack of equipment to do th ejob, lack of staff to help the work, team members that don't work to their full potential, and management demands vs staffing levels and time constraints	Re
Lack of staffing that causes stress	Re
When Patients have to wait too long in recovery room unnecessarily for a ward bed to go to after having their operation.	re
Staff shortages and allocations being switch last minute with no notice.	re
trying to give perfect care to patients even though you are understaffed	Re
not enough staff/resources & having to work shifts	Re
pressure of beds. poor wage in comparision with training and accountability- having to do extra shifts to sustain standard of living	Re
working nights and working in an understaffed, under-resourced NHS where the expectation is for excellance but the resources are not	Re
Struggles of juggling everything when shift is understaffed	re
Managing resource limitations	re
Insensitivity and ignorance of manager and higher authority towards their patients and staff, inadequate facilities, waste of resourced and people are rewarded for doing wrong things.	re
understaffing, night shifts	re
Short staffed at times	Re
not being able to deliver the care that is needed due to high acuity and lack of staff	Re
financial cuts in every area of nursing	re
lack of resourses	re
otganisational control and financial restrictions	re
coordinating in an emergency situations or when i am not getting a porper help when needs due to nursing care	re
The shortage of staff and the increasing workload	re
being hassled by bed manager or being short staffed	Re
poor staffing levels	Re
Lack of funding for training	re
Uncertainty about future roles as lots of doctor contracts are only 6-12 months in duration. Difficult to find opportunities for expansion and personal development.	re
Resource constraints	re
Poor staffing levels	re

When a challinging behaviour patient is difficult and shortage of staff	re
None,except stress if short staff	re
Working with limited staff/resources	re
battling for resources and funding	re
Not being able to deliver the care you would like due to lack of staff.	re
Not being able to make ladies feel better about themselvs	re
lack of resourses	re
inability to provide high standards of care when there is insufficient staff.	re
Low staffing levels, patients pressure	re
sometimes long hours, shortage of staff, low pay, unappreciation	re
managerial/lack of funding and staffing	re
The constant feel of having service cut due to funding	re
When I am unable to do my job as efficiently or as safely as I can due to staffing issues	re
not being able to provide the care you want to due to poor resources.	re
having to work under staff	re
Under resourced	re
lack od resources	re

What is the least enjoyable aspect of your role?	**Response labels from themes**
lack of senior support, pressure to do more than what my disability allows	Su
Management, criticism, lack of thanks	Su
Lack of support	Su
Treatment by management	Su
Not always feeling that my role is recognised or actually deemed that important by certain individuals	Su
Colleagues	Su
Working in a large department with difficult personalities, inability to deliver good care due to shortages.	Su
Management	Su
Staff management	Su
Lack of mentorship	Su

Management issues	Su
Neurosurgeons! (i.e. people who don't think the way I do!)	Su
feeling helpless	Su
People who don't want your help or find problems with everything you do for them	Su
Being managed poorly, press being horrible about NHS staff. Bureaucracy and having to cover one's back all the time. People reinventing the wheel...	Su
Feeling like you've failed someone/to do something. Also getting abuse from patients/relatives. Stress. Sputum	Su
Expectations from higher grades who do not have patient contact	Su
staff management	Su
when someone pick on me.	Su
conflict with other medical professionals	Su
poor communication, too busy, acuity too high, lack of support from senior staff, rude patients, lack of support	Su
LACK OF RESPECT / LACK OF TEAMWORK	Su
being moaned at	Su
The people I work with	Su
managing staff	Su
Management	Su
being told off by managers	Su
not being listened to or respected	Su
lack of communication from management	Su
Colleagues who don't show kindness and compassion to patients or colleagues.	Su
Not being appreciated or being looked down upon	Su
the system and lack of support from senior management	Su
poor delegation from my manager	Su
management	Su
overbearing managers and tick box tasks.	Su
managerial stuff	Su
conflict	Su
Feeling bad when I get something wrong and someone pulls me up on it.	Su
Those team members who make working life difficult	Su

Being undervalued by Consultant colleague	Su
Managing staff in the clinical area	Su
Occasional Conflict	Su
Management	Su
less support from others	Su
Getting treated like crap by managers/HR/the government	Su
Being obstructed by managers who won't listen	Su
when i was working in the ward where my superior was less supportive	Su
conflict	Su
Management hierarchy	Su
mangers	Su
Poor behaviours of some colleagues from outside the ED	Su
Managing staff	Su
staff management	Su
management	Su
The lack of respect and appreciation from senior managerial colleagues	Su
unachievable expectations from management	Su
managers who don't listen	Su
What is the least enjoyable aspect of your role?	**Response labels from themes**
having lots of conflicting deadlines	Ts
unrealistic managment expectations	Ts
stressful and demanding job	Ts
time and management pressures	Ts
pressures on the NHS causing hugely inflated workloads and short staffing, resulting in us breaking our backs to provide mediocre care and facing a constant stream of justified complaints from neglected patients	Ts
stress	Ts
Being so busy that I feel I can't give quality nursing care	Ts
The schedule.	Ts
LONG TIME SHIFTS	Ts
Juggleing priorites, that are sometimes not even my priorities but the Trusts	Ts

when i am unable to meet the patients expectation.	Ts
time pressures on care	Ts
Funding/ time pressures to see patients	Ts
managing stressful situations	Ts
Surgical complications	Ts
being exposed to many sad situations	Ts
Stress	Ts
exhaustion	Ts
pressures on time due to workload	Ts
dealing with aspects of care outside of my control	Ts
Stress, lack of support, long hours	Ts
Pressure of work	Ts
we sometimes hurt the children (injections or upset passing NG tubes)	Ts
Having constant pressures of financial issues throughout the NHS	Ts
The pressure of time: lots to do and time is limited	Ts
Worry over making mistakes and time pressures	Ts
being worn out	Ts
Time pressures	Ts
stress of the role	Ts
facing the same scenario repeatedly	Ts
juggling all the different aspects	Ts
continual pressure / taking staff down performance / sickness	Ts
Pressure over exams and keeping up with assessments and CPD, including the culture where everyone seems stressed about these, so the feeling is perpetuated.	Ts
stress and unrealistic rexpectations	Ts
time management and lack of support from the management	Ts
how much pressure were under to perform perfectly all the time	Ts
stress at work place due to short of staff and unable to fulfill all patient's care effectively and safely some days.when patient and family shows there un pleasant face to staff even something may have happened with other profession.	Ts
the stress and constant pressures	Ts
stressful working situation	Ts

possible burn out	Ts
Juggling all the work I need to get done	Ts
Stress at work	Ts
not have enough time to do some research, study	Ts
Tired/laziness	Ts

What is the least enjoyable aspect of your role?	**Response labels from themes**
Often having to stay late then being stuck in traffic	Wo
the workload	Wo
workload	Wo
The workload	Wo
Heavy work load so I don't have sufficient time to do my job to the best of my ability	Wo
Culture to put up with an exhausting workload	Wo
workload/staff shortage/children passing away	Wo
huge workload, unpleasant managers	Wo
workload, underpaid	Wo
doing roles not in my job description	Wo
Workload	Wo
schedule and workload	Wo
Having an overwhelming workload and therefore feeling I have given the time to my patients that they need and deserve.	Wo
work load and not having enough time to spend with patients	Wo
adding another job to my never ending job lists	Wo
The pressure, the workload, the hours, the stress	Wo

What is the least enjoyable aspect of your role?	**Response labels from themes**
Patients relatives - not understanding this system and having standards that are unreachable	Xs
the system	Xs

the frustration of being part of a big system that there is little you can do to change things	xs
The stress the system puts on doctors	Xs
Pressures from the system, not enough pay, patient and families are sometimes very unappreciative	Xs
Red tape, rigid systems	Xs
frustrating with the system - we are mainly firefighting, unable to really practise health promotion to stop people getting sick!	xs
Constant change and non patient facing staff dictating systems to us with no real understanding of its impact .	xs
system pressures, injustice, team disharmony	xs
system failure, tha glacial pace of change in an organisation and the media coverage (manipulated by the govt) of the NHS	Xs
Thinking about the money aspect of work - ie business cases	Xs
working within a system that is under resourced with too heavy a workload	Xs
hospital dictates not relevant to speciality	Xs
working in unfamiliar areas	Xs
being constrained by illogical processes	Xs
Managing other specialties in attempt to meet the 4-hour standard	Xs
every day is different	Xs
clinics overbooked and late	Xs
meeting targets over people	Xs

14.0 ***Backward elimination regression model 1: Explanatory Variables on Compassion Satisfaction (n = 487)***

Variable	*B*	SE *B*	β	*p* value	95% CI lower upper
Constant	21.22	2.7	----	----	----
Intrapersonal E.I	.43	.06	.29	.000*	.305 .565
Cognitive fusion	-.14	.02	-.22	.000*	-.202 -.087
Cognitive reappraisal	1.38	.27	.21	.000*	.847 1.922
Interpersonal E.I	.051	.070	.035	.463	-.086 .188
Expressive suppression	-.179	.227	-.036	.429	-.625 .266
Emotional contagion	.004	.124	.002	.972	-.240 .248

**p < .001, B = unstandardized beta coefficient, β = standardised beta coefficient, E.I = Emotional intelligence, CI = confidence interval*

Backward elimination regression model 2: Explanatory Variables on Compassion Fatigue (n = 487)

Variable	*B*	SE *B*	β	*p* value	95% CI lower upper
Constant	41.70	2.36	----	----	----
Intrapersonal E. I	-.48	.05	-.35	.000*	-.599 -.373
Cognitive fusion	.21	.02	.34	.000*	.166 .265
Cognitive reappraisal	-.95	.23	-.15	.000*	-1.421 -.488
Interpersonal E.I	.086	.060	.062	.156	-.033 .205
Expressive suppression	.366	.196	.077	.062	-.019 .750
Emotional contagion	.256	.107	.097	.017	.046 .466

**p < .001, B unstandardized beta coefficient, β standardised beta coefficient, E.I Emotional intelligence, CI confidence interval*

15.0 Literature review: search updates

Print Search History: EBSCOhost- MEDLINE
26 May 2019
07:11

Print Search History

MY

EBSCOhost

Sunday, May 26, 2019 2:09:51 AM

#	Query	Limiters/Expanders	Last Run Via	Results
S122	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S121	cognitive reappraisal* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S120	cognitive reappraisal* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	4
S119	Negative affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,032
S118	Negative affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	757
S117	Negative mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	111

S116	Negative mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	182
S115	Negative emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	845
S114	Negative emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	710
S113	Positive affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	913
S112	Positive affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,151
S111	Positive mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	110
S110	Positive mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	188
S109	Positive emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	719
S108	Positive emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	822
S107	Mood regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	10

S106	Mood regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	36
S105	Affect regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	135
S104	Affect regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	66
S103	Emotion regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	78
S102	Emotion regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	120
S101	expressive suppression* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S100	expressive suppression* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S99	expressive suppression* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S98	expressive suppression* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S97	expressive suppression* AND nurses*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0

S96	expressive suppression* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S95	expressive suppression* AND doctors*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S94	expressive suppression* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S93	expressive suppression* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S92	expressive suppression* AND healthcare professionals*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S91	expressive suppression* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S90	cognitive reappraisal* AND healthcare professionals*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S89	cognitive reappraisal* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S88	cognitive reappraisal* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S87	cognitive reappraisal* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1

S86	cognitive reappraisal* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S85	cognitive reappraisal* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S84	cognitive reappraisal* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S83	cognitive reappraisal* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S82	cognitive reappraisal* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S81	negative mood* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S80	negative mood* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S79	negative mood* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	3
S78	negative mood* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	109
S77	negative mood* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	21
S76	negative mood* AND physicians*	Limiters - English	Interface - EBSCOhost Research Databases	127

		Search modes - Find all my search terms	Search Screen - Advanced Search Database - PsycINFO	
S75	negative mood* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	40
S74	negative affect* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	343
S73	negative affect* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	628
S72	negative affect* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	154
S71	negative affect* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	734
S70	negative affect* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	28
S69	negative affect* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S68	negative emotion* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S67	negative emotion* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	26
S66	negative emotion* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	686

			Database - PsycINFO	
S65	negative emotion* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	151
S64	negative emotion* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	452
S63	negative emotion* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	339
S62	positive mood* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	46
S61	positive mood* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	125
S60	positive mood* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	23
S59	positive mood* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	105
S58	positive mood* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	5
S57	positive mood* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S56	positive affect* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	16

S55	positive affect* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	33
S54	positive affect* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	884
S53	positive affect* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	178
S52	positive affect* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	695
S51	positive affect* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	376
S50	positive emotion* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	311
S49	positive emotion* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	439
S48	positive emotion* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	153
S47	positive emotion* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	693
S46	positive emotion* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	25
S45	positive emotion* AND dentists*	Limiters - English	Interface - EBSCOhost Research Databases	11

		Search modes - Find all my search terms	Search Screen - Advanced Search Database - PsycINFO	
S44	mood regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S43	mood regulation* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S42	mood regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S41	mood regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S40	mood regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S39	mood regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	29
S38	mood regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S37	affect regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	42
S36	affect regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	87
S35	affect regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	26

			Database - PsycINFO	
S34	affect regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	65
S33	affect regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S32	affect regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S31	emotion regulation* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S30	emotion regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S29	emotion regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S28	emotion regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S27	emotion regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	76
S26	emotion regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	18
S25	emotion regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	68

S24	emotion regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	43
S23	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S22	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S21	expressive suppression* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S20	cognitive reappraisal* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	4
S19	cognitive reappraisal* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S18	Negative affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	757
S17	Negative affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,032
S16	Negative mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	182
S15	Negative mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	111

S14	Negative emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	710
S13	Negative emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	845
S12	Positive affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,151
S11	Positive affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	913
S10	Positive mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	110
S9	Positive mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	188
S8	Positive emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	822
S7	Positive emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	719
S6	Mood regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	10
S5	Mood regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	36

S4	Affect regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	135
S3	Affect regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	66
S2	Emotion regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	78
S1	Emotion regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	120

#	Query	Limiters/Expanders	Last Run Via	Results
S144	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S143	expressive suppression* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S142	cognitive reappraisal* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	4
S141	cognitive reappraisal* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S140	Negative affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	757
S139	Negative affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,032
S138	Negative mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	182
S137	Negative mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	111

S136	Negative emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	710
S135	Negative emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	845
S134	Positive affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,151
S133	Positive affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	913
S132	Positive mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	110
S131	Positive mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	188
S130	Positive emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	822
S129	Positive emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	719
S128	Mood regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	10
S127	Mood regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	36

S126	Affect regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	135
S125	Affect regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	66
S124	Emotion regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	78
S123	Emotion regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	120
S122	expressive suppression* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S121	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S120	cognitive reappraisal* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S119	cognitive reappraisal* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	4
S118	Negative affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,032
S117	Negative affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	757

S116	Negative mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	111
S115	Negative mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	182
S114	Negative emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	845
S113	Negative emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	710
S112	Positive affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	913
S111	Positive affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,151
S110	Positive mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	110
S109	Positive mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	188
S108	Positive emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	719
S107	Positive emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	822

S106	Mood regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	10
S105	Mood regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	36
S104	Affect regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	135
S103	Affect regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	66
S102	Emotion regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	78
S101	Emotion regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	120
S100	expressive suppression* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S99	expressive suppression* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S98	expressive suppression* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S97	expressive suppression* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0

S96	expressive suppression* AND nurses*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S95	expressive suppression* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S94	expressive suppression* AND doctors*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S93	expressive suppression* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S92	expressive suppression* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S91	expressive suppression* AND healthcare professionals*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S90	expressive suppression* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S89	cognitive reappraisal* AND healthcare professionals*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S88	cognitive reappraisal* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S87	cognitive reappraisal* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S86	cognitive reappraisal* AND doctors*	Limiters - English	Interface - EBSCOhost Research Databases	1

		Search modes - Find all my search terms	Search Screen - Advanced Search Database - PsycINFO	
S85	cognitive reappraisal* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S84	cognitive reappraisal* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S83	cognitive reappraisal* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S82	cognitive reappraisal* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S81	cognitive reappraisal* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S80	negative mood* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S79	negative mood* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S78	negative mood* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	3
S77	negative mood* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	109
S76	negative mood* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	21

			Database - PsycINFO	
S75	negative mood* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	127
S74	negative mood* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	40
S73	negative affect* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	343
S72	negative affect* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	628
S71	negative affect* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	154
S70	negative affect* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	734
S69	negative affect* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	28
S68	negative affect* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S67	negative emotion* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S66	negative emotion* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	26

S65	negative emotion* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	686
S64	negative emotion* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	151
S63	negative emotion* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	452
S62	negative emotion* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	339
S61	positive mood* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	46
S60	positive mood* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	125
S59	positive mood* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	23
S58	positive mood* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	105
S57	positive mood* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	5
S56	positive mood* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S55	positive affect* AND dentists*	Limiters - English	Interface - EBSCOhost Research Databases	16

		Search modes - Find all my search terms	Search Screen - Advanced Search Database - PsycINFO	
S54	positive affect* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	33
S53	positive affect* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	884
S52	positive affect* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	178
S51	positive affect* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	695
S50	positive affect* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	376
S49	positive emotion* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	311
S48	positive emotion* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	439
S47	positive emotion* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	153
S46	positive emotion* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	693
S45	positive emotion* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	25

			Database - PsycINFO	
S44	positive emotion* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	11
S43	mood regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S42	mood regulation* AND midwives*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S41	mood regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S40	mood regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S39	mood regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S38	mood regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	29
S37	mood regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	9
S36	affect regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	42
S35	affect regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	87

S34	affect regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	26
S33	affect regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	65
S32	affect regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S31	affect regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1
S30	emotion regulation* AND dentists*	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S29	emotion regulation* AND dentists*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S28	emotion regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S27	emotion regulation* AND midwives*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S26	emotion regulation* AND nurses*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	76
S25	emotion regulation* AND doctors*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	18

S24	emotion regulation* AND physicians*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	68
S23	emotion regulation* AND healthcare professionals*	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	43
S22	expressive suppression* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	0
S21	expressive suppression* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	2
S20	cognitive reappraisal* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	4
S19	cognitive reappraisal* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	6
S18	Negative affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	757
S17	Negative affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,032
S16	Negative mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	182
S15	Negative mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	111

S14	Negative emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	710
S13	Negative emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	845
S12	Positive affect* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	1,151
S11	Positive affect* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	913
S10	Positive mood* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	110
S9	Positive mood* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	188
S8	Positive emotion* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	822
S7	Positive emotion* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	719
S6	Mood regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	10
S5	Mood regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	36

S4	Affect regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	135
S3	Affect regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	66
S2	Emotion regulation* AND (nurses* or midwives* or dentists*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	78
S1	Emotion regulation* AND (healthcare professionals* or physicians* or doctors*)	Limiters - English Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO	120

Scopus - Saved searches
26 May 2019
07:41
My organization
Lancaster University
Saved searches

- **Create new saved search**

Combine queries...e.g. #1 AND NOT #3
Clear Field

result #106	Search 106	(TITLE-ABS-KEY (positive AND affect*) AND TITLE-ABS-KEY (nurses*)) AND (LIMIT-TO (LANGUAGE , "English")) View Less Edit query	1,704	26 May 2019
result #105	Search 105	(TITLE-ABS-KEY (positive AND affect*) AND TITLE-ABS-KEY (midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	276	26 May 2019

result #104	Search 104	(TITLE-ABS-KEY (expressive AND suppression*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	0	26 May 2019
result #103	Search 103	(TITLE-ABS-KEY (expressive AND suppression*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	2	26 May 2019
result #102	Search 102	(TITLE-ABS-KEY (cognitive AND reappraisal*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	10	26 May 2019
result #101	Search 101	(TITLE-ABS-KEY (cognitive AND reappraisal*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	1	26 May 2019
result #100	Search 100	(TITLE-ABS-KEY (cognitive AND reappraisal*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	10	26 May 2019
result #99	Search 99	(TITLE-ABS-KEY (negative AND affect*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	1,373	26 May 2019
result #98	Search 98	(TITLE-ABS-KEY (negative AND affect*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	412	26 May 2019
result #97	Search 97	(TITLE-ABS-KEY (negative AND mood*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More	35	26 May 2019

		View Less Edit query		
result #96	Search 96	(TITLE-ABS-KEY (negative AND mood*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	151	26 May 2019
result #95	Search 95	(TITLE-ABS-KEY (negative AND emotion*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	1,092	26 May 2019
result #94	Search 94	(TITLE-ABS-KEY (negative AND emotion*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	277	26 May 2019
result #93	Search 93	(TITLE-ABS-KEY (positive AND affect*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	454	26 May 2019
result #91	Search 91	(TITLE-ABS-KEY (positive AND mood*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) View Less Edit query	166	26 May 2019
result #90	Search 90	(TITLE-ABS-KEY (positive AND mood*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	39	26 May 2019
result #89	Search 89	(TITLE-ABS-KEY (positive AND emotion*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	286	26 May 2019

result #88	Search 88	(TITLE-ABS-KEY (positive AND emotion*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	1,268	26 May 2019
result #86	Search 86	(TITLE-ABS-KEY (mood AND regulation*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	15	26 May 2019
result #85	Search 85	(TITLE-ABS-KEY (mood AND regulation*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	9	26 May 2019
result #84	Search 84	(TITLE-ABS-KEY (affect AND regulation*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	87	26 May 2019
result #83	Search 83	(TITLE-ABS-KEY (affect AND regulation*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	170	26 May 2019
result #81	Search 81	(TITLE-ABS-KEY (emotion AND regulation*) AND TITLE-ABS-KEY (nurses* OR midwives* OR dentists*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	98	26 May 2019
result #80	Search 80	(TITLE-ABS-KEY (emotion AND regulation*) AND TITLE-ABS-KEY (healthcare AND professionals* OR physicians* OR doctors*)) AND (LIMIT-TO (LANGUAGE , "English")) ... View More View Less Edit query	24	26 May 2019

08:29 Logged in as gordon jackson-koku at lancaster university

- Logoff

OVID: Search Form
Search History
(42searches found)

Contract

# ▲	Searches	Results	Type	Actions
1	(Emotion regulation* and (healthcare professionals* or physicians* or doctors*)).af.	1749	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
2	limit 1 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	1747	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
3	(Emotion regulation* and (nurses* or midwives* or dentists*)).af.	1310	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove

4	limit 3 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	1309	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
5	(Affect regulation* and (nurses* or midwives* or dentists*)).af.	525	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
6	limit 5 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	525	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
7	(Affect regulation* and (healthcare professionals* or physicians* or doctors*)).af.	840	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
8	limit 7 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	839	Advanced	Display Results Save Edit

				Remove More ▪ Save ▪ Edit ▪ Remove
9	(Mood regulation* and (healthcare professionals* or physicians* or doctors*)).af.	354	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
10	limit 9 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	352	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
11	(Mood regulation* and (nurses* or midwives* or dentists*)).af.	192	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
12	limit 11 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	192	Advanced	Display Results Save Edit Remove More • Save

				• Edit • Remove
13	(Positive emotion* and (healthcare professionals* or physicians* or doctors*)).af.	2731	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
14	limit 13 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	2719	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
15	(Positive emotion* and (nurses* or midwives* or dentists*)).af.	2392	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
16	limit 15 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	2382	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove

17	(Positive mood* and (healthcare professionals* or physicians* or doctors*)).af.	1018	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
18	limit 17 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	1017	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
19	(Positive mood* and (nurses* or midwives* or dentists*)).af.	754	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
20	limit 19 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	754	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
21	(Positive affect* and (healthcare professionals* or physicians* or doctors*)).af.	3138	Advanced	Display Results Save Edit

				Remove More • Save • Edit • Remove
22	limit 21 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	3136	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
23	(Positive affect* and (nurses* or midwives* or dentists*)).af.	2455	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
24	limit 23 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	2440	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
25	(Negative emotion* and (nurses* or midwives* or dentists*)).af.	5893	Advanced	Display Results Save Edit Remove More • Save

				• Edit • Remove
26	limit 25 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	5861	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
27	(Negative emotion* and (healthcare professionals* or physicians* or doctors*)).af.	7228	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
28	limit 27 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	7192	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
29	(Negative mood* and (nurses* or midwives* or dentists*)).af.	1301	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove

30	limit 29 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	1299	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
31	(Negative affect* and (nurses* or midwives* or dentists*)).af.	3890	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
32	limit 31 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	3882	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
33	(Negative affect* and (healthcare professionals* or physicians* or doctors*)).af.	5554	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
34	limit 33 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	5540	Advanced	Display Results Save Edit

				Remove More • Save • Edit • Remove
35	(cognitive reappraisal* and (healthcare professionals* or physicians* or doctors*)).af.	202	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
36	limit 35 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	202	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
37	(cognitive reappraisal* and (nurses* or midwives* or dentists*)).af.	157	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
38	limit 37 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	157	Advanced	Display Results Save Edit Remove More • Save

				• Edit • Remove
39	(expressive suppression* and (nurses* or midwives* or dentists*)).af.	33	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
40	limit 39 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	33	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
41	(expressive suppression* and (healthcare professionals* or physicians* or doctors*)).af.	40	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove
42	limit 41 to english language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]	39	Advanced	Display Results Save Edit Remove More • Save • Edit • Remove

Combine
with:

Search history sorted by search number descending

- Basic Search
- Find Citation
- Search Tools
- Search Fields
- Advanced Search
- Multi-Field Search

5 Resources selected | Hide | Change
Database Field Guide Books@Ovid May 20, 2019,
Database Field Guide Journals@Ovid Full Text May 24, 2019,
Database Field Guide Your Journals@Ovid,
Database Field Guide Embase 1974 to 2019 May 24,
Database Field Guide Ovid MEDLINE(R) ALL 1946 to May 24, 2019
Basic Search Hint
Basic Search Hint
X
Basic Search Include Multimedia Include Related Terms
Limits (expand) (close)

Results Tools
Options opens a popup window
[search_left_heading] text for en not available
Search Information
You searched:
limit 41 to English language [Limit not valid in Books@Ovid,Journals@Ovid,Your Journals@Ovid; records were retained]
- + Search terms used:

- doctors*
- expressive
- suppression*
- healthcare
- professionals*
- physicians*

Search Returned:
39 text results
Deduplicate
Sort By:

Customize Display opens a popup window

Filter By

Add to Search History

(0)

- Years

  All Years

  - Current year
  - Past 3 years
  - Past 5 years
  - Specific Year Range
- Subject
- Author
- Journal, Resource , Publication Type

- 16.0 Permission from author to use Gross's Process model of Emotion Regulation

Re: Permission to use a diagram from your 2007 paper in PhD thesis

On Jul 1, 2020, at 2:38 AM, gordonjackson-koku@doctors.org.uk wrote:

Dear Dr Thompson

I will like to seek you permission to use a diagram of the **Process model of Emotion Regulation** from your distinguished 2007 paper - *Emotion Regulation: Conceptual Foundations* in the PhD thesis.

I am a practising physician in London (U..K) and my PhD work is on the role of Emotion Regulation in Compassion satisfaction and Fatigue in physicians and nurses.

I look forward to hearing from you soon.

Kind regards, Gordon.

Dr Gordon Jackson-Koku LLM MFOM
Consultant Physician | St. George's University Hospitals NHS Trust | London
Doctoral Candidate | Division of Health Research | FHM | Lancaster University
Tel: + 44 (0) 7985799230

On 2020-07-01 20:13, Ross Thompson wrote:

Gordon,

You are certainly welcomed to use the figure from the 2007 chapter, with my best wishes. Your thesis work sounds interesting and important.

— Ross Thompson

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(530) 752-2087 (fax)
rathompson@ucdavis.edu

Center for Poverty Research
https://poverty.ucdavis.edu

To Ross Thompson on 2020-07-01 20:27
Details Plain text

Ross,

I am much obliged. and I look forward to publishing my findings in due course.

Kind regards, Gordon.

Dr Gordon Jackson-Koku LLM MFOM
Consultant Physician | St. George's University Hospitals NHS Trust | London
Doctoral Candidate | Division of Health Research | FHM | Lancaster University
Tel: + 44 (0) 7985799230