QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

PRIORITIZING STRESS MANAGEMENT STRATEGIES FOR KAHRAMAA

CUSTOMER SERVICE DEPARTMENT: ANALYTIC NETWORK PROCESS AND

SUPERMATRIX APPROACH

BY

MOHAMMED ADEL I. AL NAJJAR

A Thesis Submitted to

Faculty of the College of Business and Economics

in Partial Fulfillment of the Requirements for the Degree of

Master's in Business Administration

January 2020

COMMITTEE PAGE

The members of the Committee approve the thesis of
Mohammed Adel Al Najjar defended on 03/12/2019

_____

Dr. Mohammed Nishat Faisal
Thesis/Dissertation Supervisor

_____

Prof. Belaid Aouni
Committee Member

_____

Prof. Emad Ahmed Abushanab
Committee Member

Approved:

_____

Dr.Adam Mohamed Fadlalla, Dean, College of Business and Economics

ABSTRACT

Stress is a ubiquitous phenomenon that has several fiscal and practical consequences on both the employees and the employers. Implementing stress management strategy in the workplace is a critical issue for leaders and managers. Studying stress and reducing its impact on employees is very helpful for organizations. The aim of this paper is to present an applicable and reliable evaluation method to assess decision makers in Kahramaa Customer Service Department to prioritize and select the most appropriate stress reduction strategy. To meet the aims and objectives of the study, the Analytical Network Process (ANP) method is used to determine the best possible strategy to reduce stress based on reliable assessment criteria that are designed to suit the case of Kahramaa Customer Service Department.

The research compared the best strategy out of four different stress reduction strategies which are problem-focused strategy, emotional focused strategy, job characteristics and role ambiguity strategy, and corporate wellness program. The study focused on the prioritization of those strategies by assessing the criteria and sub-criteria of each of the dimensions used for the assessment. The criteria importance and relativity were driven by a comprehensive literature review to support the pairwise comparisons using and utilizing experts' and scholars' opinions. The research concluded that the most effective strategies for stress reduction are social support strategies, problem-solving strategies, HR strategies, and environmental strategies. The ANP analysis shows that the corporate wellness program is the most effective and optimal strategy for stress reduction for Kahramaa Customer Service Department employees. The corporate wellness program received the highest scores among other strategies based on the criteria selection and prioritization. The assessment criteria, the sub-criteria, and the alternatives can be altered and customized to outfit any government or semi-government organization in Qatar.

This study is focused and aims to assess decision makers. Such studies are not common in the Qatari market. Qatar market is rapidly growing. The government and semi-government organizations in Qatar are racing against time to cope with modern business strategies to fulfil their role in the growing eco-system of the country. Such studies can be a simple, straightforward, and reliable approach to assess managers in government and semi-government organizations on how to improve the working conditions of their employees and reduce stress. Reducing stress is an urging matter to organizations such as Kahramaa. Employees perform better when they are not stressed. Their productivity grows, as well as their commitment, dedication, and loyalty. On the other hand, stressed employees will not be creative enough and will not be effective members in the organization. Accordingly, all organizations in Qatar that have the same problem of Kahrama can highly benefit from this study.

Keywords: Stress, Multi-Criteria Decision Model (MCDM), Analytic Network Process, Kahramaa.

DEDICATION

This research paper is dedicated to my beloved parents, whom have been always a source of inspiration through all achievements. To my thesis supervisor, Dr. Mohammed Nishat Faisal, who was the major spiritual and emotional supporter to accomplish this task together.

Last but not least, I am dedicating this work to my classmates, whom supported me throughout the process via sharing their knowledges with me, specially my brother Parameshwar & my sister Haya Al Kubaisi.

I will always appreciate what they have done for me.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1 Background of the Research

Scholars defined work stress in various ways. However, the general perception of the work stress concept links it to working conditions being beyond employee endurance and capabilities (Cox *et al.,* 2000; Blaug *et al.,* 2007; Park, 2007; Chandola, 2010; Shahsavarani, 2015; Fink, 2017). This simply means that work stress is a result of harsh working conditions or unbearable job status in which the employee will have to endure physical or mental pressure.

Work stress is a ubiquitous phenomenon that has several fiscal and practical consequences. A research conducted by Leka *et al.* (2005) suggested that work stress is the result of the individuals' reactions towards the pressures and demands of work in such a way so that it differs from their knowledge level and working capabilities, which makes them feel challenged. Stressed employees have low self-esteem, lack performance in the workplace, and many times; they may also be hypersensitive, which can result in employee turnover as employees will find their jobs to be uncomfortable (Blaug *et al.,* 2007; Shahsavarani, 2015).

Unfortunately, job stress can have a series of negative effects on the employee and the employer. On the employee, it can have physical responses and long-term health conditions of several types. Scholars linked job stress to blood pressure, diabetes, weakened immunity system, depression, and anxiety (Park, 2007; Jehangir *et al.,* 2011; CAPE, 2012; Idham *et al.,* 2014; ILO, 2016). Managerial studies also found a direct link between job stress and job security, job satisfaction, employee performance, and productivity. Work stress can also be one of the factors behind high turnover (Jehangir *et al.,* 2011; Greubel and Kecklund, 2011; Kotteeswari and Sharief, 2014; Fonkeng, 2018). This means that job stress cannot be ignored by organizations, especially public organizations with purposes to serve the society such as Kahramaa.

1.2 Problem Definition and Objectives

Work stress happens for many reasons. Some are controllable by organizations and some are intrinsic reasons related to the employee himself (Michie, 2002; Ipsen & Jensen, 2010; Mustafa *et al.,* 2015; Divakar, 2015; Gharib *et al.,* 2016; Okeke *et al.,* 2016; Vijayan, 2017; Arrman and Bjork, 2017). The customer service department in Kahramaa has recently been awarded much more responsibilities and an entirely new operational mechanism. This created a stress cloud in the department among employees. Using primary and secondary

research methods, this study investigates the reasons and causes of work stress in the customer service department in Kahramaa. It also examines the impact of work stress on employee performance and productivity. The research also looks into strategies to mitigate stress. Those strategies are driven from the literature review of the study and are included in the analytical network process diagram.

1.3 Rationale of the Study

Situations that can create stress amongst employees include those that are uncontrollable or unpredictable, ambiguous, uncertain, and which will likely involve loss, conflict, or performance expectations. Additionally, stress can also result from time refrained events such as work-related deadlines, or by continuing situations like job insecurity or long commuting time to the workplace (Bano and Jha, 2012; Gharib *et al.,* 2016; Okeke *et al.,* 2016).

Resources that are considered useful for managing and relieving pressure and stress, involve certain personal characteristics like problem-solving skills, time management, and assertiveness, along with a good working environment and social support. These resources can be enhanced through adequate investments within training, infrastructure, employment practices, and good management, as well as the way in which work is being organized.

Accordingly, it can be noted that studying stress and reducing its impact on employees is very helpful for organizations. In the case of Kahramaa, such a study can set an example to the organization on how to solve such an issue; it can also set an example to other organizations with similar problems among its employees.

1.4 Research Questions

The research explains the different types of stress in an organization and proposes solutions for them. Through this representation, the research tends to answer the following questions:

1. What types of stress are there in the organization?
2. What are the different effective strategies for stress reduction and minimization?
3. What are the most important criteria for stress reduction strategy selection?
4. What is the optimal strategy selection for stress reduction using MCDM model?

CHAPTER 2: LITERATURE REVIEW

2.1 Factors Leading to Work Stress

A conventional concept from employers towards work stress is to out rightly blame the stress victim instead of pointing out the cause. As a matter of fact, it is now increasingly being recognized by employers that they are dutiful, also according to law, to ensure that employees are of sound health. Moreover, this also serves to be the long term economic interest for the employers as increased stress levels will likely result in increased employee turnover, reduced work performance, and ultimately reduced client-related satisfaction. According to Lin, Kain and Firts (2013), good employment practice involves evaluating stress levels amongst employees which include identifying pressures in work which can result in long-lasting and high stress levels, deciding whether the organization is doing well in preventing harm caused by increased stress levels and; deciding who are the most affected people from stress-related harm (Lin *et al.,* 2013).

Table 1: The Problems of Stress (Source: Michie 2002, p. 68)

The problem of stress

For the individual	For the workplace
Threats	
• Personal development • Goal achievement/functioning • Quality of life/well-being • Health • Confidence/self-esteem	• Increased conflict and poor communication • Reduced morale and job satisfaction • Increased level of absenteeism or employee turnover • Reduced quality and quantity of work • Recruitment issues

Employees feel stressed because of several factors and hence, reactions to stress at the workplace are not a separate aspect (Leka *et al.,* 2005). The stress levels change rapidly amongst employees because of varying reasons which includes both organizational factors like work overload, conflicts amongst the employees, etc.

Stress levels can also increase due to the transitions that occur in personal lives of the employees. Personal factors contributing towards stress includes both domestic issues and financial problems.

2.1.1 Organizational Factors

Although the scale of challenges associated with workplace stress is quite evident through the path of literature over workplace stress, however, noticeable sources that are considered to be major organizational sources to work stress are mainly those dimensions that are related to the context and content of work. Stress experiences many times originate from work content and can be associated with factors that are intrinsic to the job and organization, as is diagrammatic in figure 1 below.
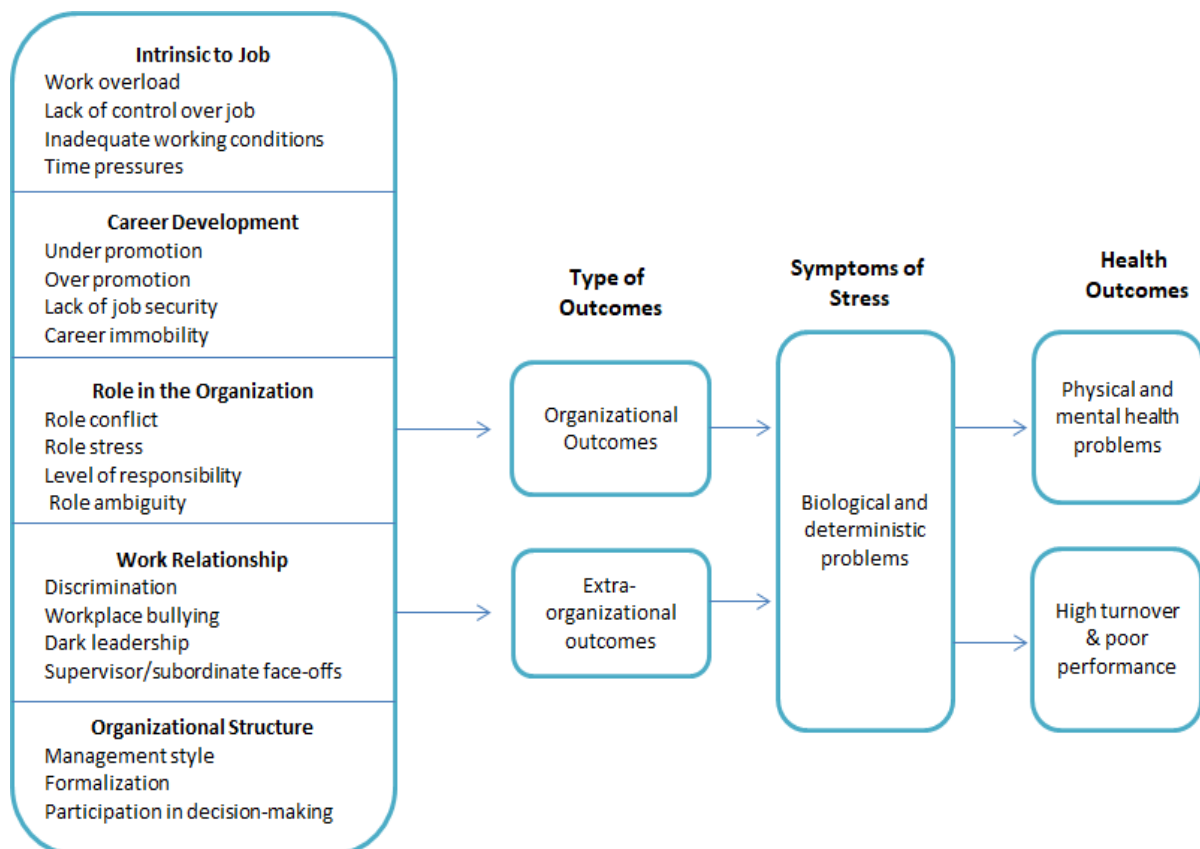

Figure 1: A diagrammatic representation of organizational factors associated with work-related stress & outcomes
Source: (Murphy, 1995; Michie, 2002)

From the above diagram, it is evident that various factors in the workplace hold the potential of producing adverse organizational and extra-organizational outcomes, which can

impose stress upon both the physical well-being and mental health of the workers. The first factor is unique to the job content, and elements like workload, low work autonomy, weak working system, and time pressures over the employees pose damage to the health and well-being of the workers. In the second category of organizational stressors includes those issues that tend to undermine career development. Factors implicit within this category emphasizes that lack of job security can potentially impede career progression and will also negatively influence the sense of work commitment of the employees. For example, continuous changes due to technological advancements utilized by companies to improve workplace performance and maintain competitive advantage have led to a growth within contingent work arrangements resulted by outsourcing,, mergers and acquisitions, downsizing as well as restricting of work schedules so as to cope up with the increasing pace of global competition (Kossek *et al.,* 2012). These changes have resulted in a stressful working environment, which results in job insecurities, job autonomy, poor promotional prospects, and even career stagnation (Colligan & Higgins, 2005).

The third category focuses on how the roles and responsibilities can stimulate stress that employees hold in an organization. Stress, at this level, mainly saddles at the managerial level that has higher responsibilities. When, at this level, there are no clear demarcations about a job role or where employees are held answerable to multiple demands from their superiors in a simultaneous yet unrealistic manner, job stress is common because of role conflict and role ambiguity (Ackfeldt & Malhotra, 2013).

The fourth factor deals with the relationships that are prevailing in the organization. Problematic relationships amongst the managers, co-workers, and subordinates in the form of either threat of violence, bullying, harassment, biased opinion, unsupportive management, and many other such deviant behaviors tend to generate outcomes that can be disrespectful or disruptive to the turnovers and earnings of the organization. The final category relates to the structure or climate of the organization. A major attribute of organizational structure is formalization, which is the degree to which roles in the organization are standardized and where rules and regulations guide wok content. Employees working in this environment gave less autonomy to execute work requirements productively. Since rigid rules and procedures will be followed, employees will experience high-stress levels, which can impact employee engagement, performance levels, working conditions, reward mechanisms, etcetera (Colligan & Higgins, 2005).

2.1.2 Intrinsic (Personal) Factors

Many personal issues are also considered to be contributors to stress in the workplace. These factors can include domestic problems like the loss of a loved one, divorce, or financial issues. These factors are categorized to be specific reasons that can lead to stress (McVicar *et al.,* 2013). In addition to this, achievement expectations significantly contribute to employee job stress (Fives *et al.,* 2007). This basically refers to employee's belief in what they are able to accomplish from their work which assumes that unmet achievement expectations can impose a positive impact over job stress.

2.2 Stress Reaction

Stress is considered to be a normal and adaptive response to the stressors within the environment. The human body is made with an intrinsic set of responses that automatically deals with stress. However, the problem is that physiologically, the human body reacts the same to every type of stressor. Moreover, experiencing stress levels for a prolonged time period further activates this system. Four most people, regular stressors, tend to maintain the response to be activated and do not ever get a chance to 'turn off.' When this set of reactions is activated continuously, an employee may start representing symptoms and signs, which is a clear indication that they are having difficulty in coping up with the stressors at the workplace. These symptoms can be both mental and physiological in nature and calls for urgent response to manage stress within employees (Judge & Colquitt, 2004).

From performance point of view, stress can negatively affect employee performance. According to Panigrahi (2016), employees perform the best when the pressure is at optimum levels. When the pressure increases, the performance drops.

The inverted-U relationship between pressure and performance
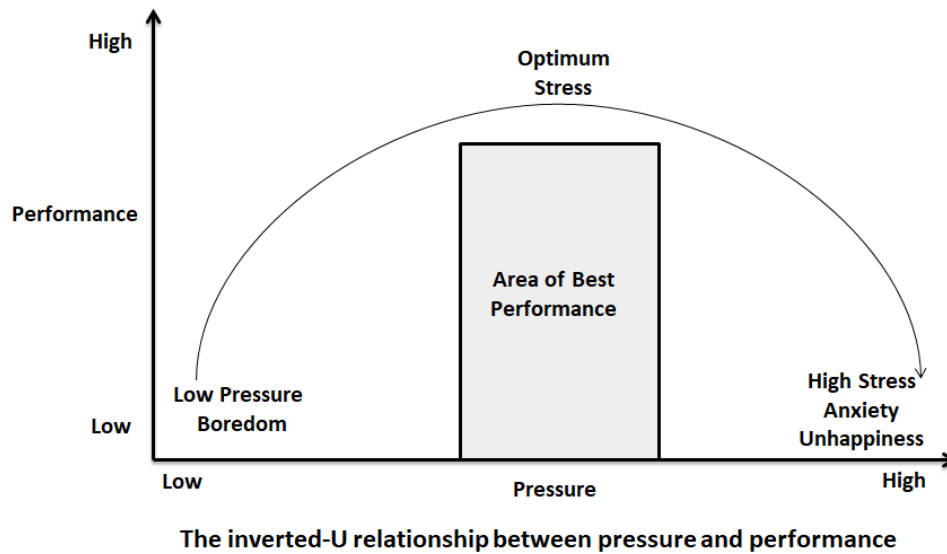
Figure 2: The Performance Curve
(Source: Panigrahi, 2016)

The above figure suggests that when employees' performance is low they get bored and lose interest in their work. When it is high, employees will be extremely stressed to complete any task. Consequently, the optimum stress is the area of the best performance.

2.2.1 Mental Symptoms

The mental stress problem significantly impacts the functional and working capacity of employees in several ways. When a worker starts feeling overwhelmed at work, they may start losing confidence and many times will become irritable, withdrawn, or angry. Excessive workplace stress is evident through numerous symptoms that are present in the mental well-being of the worker as explained in the table below by Kazmi *et al.,* (2008):

Table 2: Symptoms of Stress (Source: Kazmi *et al.,* 2008)

Cognitive Symptoms	Emotional Symptoms	Behavioral Symptoms
• Indecisiveness • Memory-related issues • Poor judgment • Unable to concentrate • Being pessimist • Fearful anticipation • Lack of objectivity	• Restlessness • Agitation • Feeling overwhelmed • Impatience • Feeling of depression or unhappiness • Short tempered • Social withdrawal	• Excessive or loss of adequate sleep • Neglecting of responsibilities • Isolation • Using drugs or alcohol to relax

2.2.2 Physiological Symptoms

Physiological symptoms are also evident as the outcomes of workplace-related stress. These problems include a reduction in immunity, musculoskeletal disorders, cardiovascular problems, muscle stiffness, backaches or headaches, weight gain or loss, muscle stiffness, and tension. It is worth mentioning that physiological symptoms in employees due to stress in the workplace can cost a company almost $200 - $300 billion annually (Addae, 2006).

2.3 Stress Management

Managing stress can be a challenging task as what one finds to be stressful can be motivational for the other. It is a natural phenomenon that humans react differently to different situations. To cope with this issue, determining what causes stress in the first place is the key which will help in understanding when employees are experiencing stress and how to handle it effectively.

2.3.1 Diagnosis: Causes of Stress

In order to avoid experiencing stress at the workplace, it is essential to determine the common causes of stress at the workplace. The following points were addressed in various studies (Bano and Jha, 2012; Gharib *et al.,* 2016) and represented to suit the nature of this study

Demand: This includes the demand for the working environment, the working pattern, as well as the workload. When employees experience sources of stress at the workplace, which include unmanageable workloads, long working hours, unrealistic deadlines, and technology overload, they will feel stressed, which will impact their performance.

Minimal support: Employees always find is positive when they have a feeling of being supported. Knowing the management and colleagues will support decisions will boost confidence and performance likewise. On the other side, having little or no support can lead to the development of feeling like undervalued or frustrated.

Lack of Control: This relates to the number of control employees have over their work. Little or no control over job aspects, no influence over performance targets, less involvement in decision making, and lack of time can be a source of pressure over the employees.

Poor Relationships: Naturally, humans may not go along well with every person they meet. This is not a problem. The problem arises when two personalities clash, which results in conflict and possible workplace bullying.

Work-Life Balance Problems: The pressure of the increasingly demanding work culture is the most pressing challenge for managing stress. Do increasing work demands have the potential to impact the home or personal life, which can impose strain over the relationships outside the workplace.

2.3.2 Risk Assessment

The company has developed a management standard for assessing stress in the organization with the aim of understanding the underlying causes of workplace stress (Bano and Jha, 2012). In this aspect, six major areas are covered which include:

- **Demands:** This involves working environment, workload and working pattern.
- **Support:** Resources and encouragement extended by the organization
- **Control:** To what extent an employee can control and perform his work
- **Role:** Do people in the organization understand their role clearly and assuring that the company does not have any conflicting roles.
- **Change:** How any change within the organization is managed as well as communicated within the organization.
- **Relationships**: Developing a positive working environment which avoids conflict and effectively deals with inadequate behaviors.

2.4 Managing Stress at Workplace

Managing stress at the workplace starts with understanding how to measure stress. There are many methods to measure stress which can be summarized as psychological measurements, and autonomic measures (Panigrahi, 2016). Psychological measurements are usually based on psychological observation of the individual. The physiological measurement is based on the actual observation of a person's health and physical appearance. The autonomic measures involve medical tests such as blood pressure (Leka et al., 1999; Panigrahi, 2016). Measuring stress is the key to understand how to manage it because it will identify its causes and impact on the individual.

According to AFT Health and Safety Program (2017), a well-designed stress management program should focus on three levels. It starts with individuals. Individual cases should be reviewed in this stage and customized and sometimes tailor-maid solutions can be done for each person independently. The second level is the group levels. This can be applied on certain groups or departments. Some departments may be stressed at some stages more than others. For example, the finance department works more in times of auditing and salaries. Therefore, stress reduction management programs can be provided to certain groups based on their needs. The final level is the organizational level. At this level, the entire organization goes through stress reduction program.

Stress management can be also done on various levels. For example, individuals can manage stress through time management. In fact, time management is one of the main and most critical mechanisms to reduce stress (Kushwaha, 2014; Panigrahi, 2016). On the other hand, the organizations can take several steps to reduce stress. These steps can come in the form of small independent actions such as open days, work-social events, or it can come in the form of comprehensive strategy. The following section discusses the different stress reduction strategies that can be implemented by organizations.

2.5 Stress Reduction Strategies

Increasing competition in the business world has led employees prone to higher stress levels. This has a direct impact on how they tend to interact with other people in society, along with how they treat people around them. This situation has prompted several agencies to

develop strategies that are capable of coping with stress that is faced by employees in the workplace. Major stress reduction strategies include:

2.5.1 Social Strategies

According to Padyab *et al.,* (2016), social support refers to both verbal and nonverbal communication between the providers and recipients and which can reduce the level of uncertainty of a situation, oneself, the other person, as well as the relationship between them. Developing a structure that allows employees to speak about issues in a way that helps them deal with the problem and provide support to each other is a stressful situation. Conducting meetings to discuss concerns of the employees and provide them adequate training, which explains the benefits of social support, is useful techniques for addressing this issue. There is a strong consensus that organizational support is an indicator of stronger relationships within an organization. This is mainly because when employees have good relationships with each other, they will be willing to provide both tangible and emotional support to other employees.

2.5.1.1 Problem Focused Solutions

Because of the working environment of the customer service department in Kahramaa Qatar, employees are more prone to experience stress (Padyab *et al.,* 2016). In this situation, several problem-solving strategies can be implemented to reduce workplace stress. In this relation, both management and psychological approaches can be utilized to resolve the problem. These both approaches can be divided into two categories:

Behavioral-focused approach (active managing and engagement): This approach involves active handling and engagement procedures. The active handling aspect includes applying problem-solving skills for resolving emotionally charged challenges. Also, reviewing and monitoring the effectiveness and implementation of stress-reducing strategies as this will enable the company to determine which strategy is the most suitable for the employees (Ebert *et al.,* 2016).

Cognitive-focused approach (planning): Through this process, thoughts are combined with actions. Determining what has caused stress makes it possible to avoid stress — conducting training sessions for employees to facilitate them in coping with what is being experienced and interacting with other employees to understand their strategies of addressing an issue proactively (Harris *et al.,* 2016).

2.5.1.2 Emotion Focused Solutions

Emotion-focused solutions are directly related to the self-esteem of employees. Employees need to support the sense of belongingness of the employees through developing a positive organizational environment along with implementing leadership strategies in a way that supports this sense. Employees' tangible support involves providing them with services or aids, which help them, cope with any stressful event. In many cases, the provision of skill-based training or knowledge can help reduce stress. To make employees feel they are being supported, they must be recognized. Moreover, employers should also help employees to understand their strengths and weaknesses and how they can improve work practices (Padyab *et al.,* 2016). Assessing employees by making formal observations, it can be made possible to assist them for self-evaluation as it will enable them to meet the expectations of the organization more and reduce stress.

2.5.2 Organizational Strategies

Organizational strategies mainly focus over human resource approaches to reduce workplace stress. These strategies mainly include:

2.5.2.1 Job Characteristics and Role Ambiguity

A significant source of stress amongst employees in departments such as the customer service department of Kahramaa Qatar is that they feel that they have overworked (Shane, 2010). One good solution to the problem is to hire more staff to refine work scope and that the employees can efficiently work towards a shared objective. Moreover, employee engagement can also be increased by implementing the democratic way of leadership, which emphasizes that every employee who is influenced by a decision will have the opportunity to give their opinions about the decision (Butts *et al.,* 2009). When employees feel that they are empowered and their sense of involvement increases, the result is reduced stress and improved work performance (Butts *et al.,* 2009). Additionally, managing and controlling work stress also calls for implementing well-designed work procedure which guarantees a clear job description and role clarity (Leka *et al.,* 2004).

2.5.2.2 Corporate Wellness Programs

For reducing work stress, organizations also introduce corporate wellness programs that are useful in handling a vast range of both working and non-working stress-related factors, which also include emotional and behavioral difficulties. Such programs explain employees about the causes and sources of stress, its effect on human health, along with providing with

personal skills that will help in reducing stress (Grossmeier, 2018). Additionally, creating an organizational culture where employee health (physical activity, healthy eating, stress management, etcetera.) is fundamental to the organization is in a position to increase the wellbeing of its employees and reduce workplace stress (Grossmeier, 2018). To improve organizational culture, it is essential to increase communication between members of the organization across different levels. This is related to the support that internal supervisors offer to employees, as well as collaboration with other employees (Karanges *et al.,* 2015). Communication also serves as a form of social support, and it could be used to enhance relationships at all levels of the organization (Collins *et al.,* 2016). Fostering high-quality connections with colleagues will enable professionals to develop a work-family culture that has even been shown to promote work-life integration (Davis-Laack, 2017).

2.6 Strategy Assessment Criteria

In considering which stress coping strategy is effective, there are several criteria which asses that the selected strategy is practical, viable and supports employees in dealing with stress (Anshel, 2000). The report will evaluate four major criteria for analyzing alternative strategies for reducing stress. These strategic options include:

2.6.1 Effectiveness

When analyzing strategies that will help in coping with stress, it is important to determine whether the strategy selected is sufficient enough to deal with stress. The effectiveness of the strategy can be determined as to how it can enable employees to improve their physical, psychological, and social wellbeing. If the strategy enables employees to interact with each other in the workplace, within the community, socially and with their families, the strategy is rendered to be viable. On the contrary, if the strategy is unable to meet set goals or it does not provide support to employees in improving their physical. Psychological and social wellness it can be considered as a viable strategy. Three sub-factors considered under the effectiveness of a strategy include:

2.6.1.1 Physical Effect

A recent study conducted by Bennion *et al,* (2018), employees performance can be optimized by implementing stress reduction measures that are effective as it will not only reduce stress levels but, will also benefit the physical; and psychological wellbeing of the employee.it should be the top priority of organizations to maintain physical health of its

employees and take effective measures for reducing workplace stress. Additionally, it is also proven that fostering positive perception management through stress reducing programs is very beneficial for the physical health of employees (Baer, 2003; Grossman *et al.,* 2004).

2.6.1.2 Social Effect

According to Shane (2010), social support is extremely important in relation to coping strategies for stress reduction. A research conducted by Shen (2009) concluded that coping strategies and psychological therapies are incomplete without considering factors such as competence and social support.

2.6.1.3 Psychological Effect

It is mutually agreed upon by the scholars that the psychological health of an employee is influenced by the coping strategies. Stress management programs that are inadequate for role stressors can be damaging for the psychological and physiological health of the individual (Shane, 2010).

2.7 Implementation

Time is a significant factor that is important when considering strategies for coping stress. Complicated strategies may involve longer time durations for the employees to get familiarized and adopt the strategy. Additionally, a longer period means increased implementation costs. It is, therefore, very important to select a strategy that has a shorter duration for implementation and adoption.

Implementation time: The need for an efficient implementation of a strategy has been recognized widely by academics and scholars (Slater and Oslon, 2001). It is explained to be a lengthy procedure that tends to consume lots of time as well as energy when compared with the strategy formulation process. This is, perhaps, the most complicated and time-consuming part of strategic management (Thompson and Strickland, 2009).

Adaptation time: Adaptation is referred to as a gradual, incremental, and persistent change within the environmental conditions (Plugge et al., 2016). The ability to consider new techniques for improving performance, coping with crises situation and adjusting to the changes are some forms of adaptability.

2.8 Integration

Integration is considered to be a consolidation of organizational abilities coupled with strategic and technical competencies in the crucial phases of producing methods and structures (Sales, 2013). A strategy is considered to be integrative when it can deal with different stressors that are being faced by the employees. Factors causing stress can derive from different events and situations, which can lead to stress. In case the strategy selected is unable to deal with these problems, then it is not integrative enough. Integration activity comprises of three components which are:

Allocated resources: Resources can be categorized as the time frame, finances, knowledge, and workforce. Effective allocation of resources is a crucial part of the process (De Feo and Janssen, 2001). According to Sales (2013), the procedure comprises of program development, planning, stress management, evaluation, prioritizing strategies, managing, budgeting, and etcetera. Effective allocation of organizational resources is crucial for developing strategies.

Strategic alignment: there are positive effects on the organization of the application of an integrated organizational program that deals with stress management. As a matter of fact, organizations need to formulate stress management programs that would collectively benefit the organization and the employees (Sales, 2013).

Support of the top management: Mellor *et al.,* (2013) emphasized on the fact that the top management of the organizations needs to realize the impact of stress over the welfare of employees and on the organization and take adequate countermeasures. The top management must support the stress management strategy in the form of resource allocation, effective and self-employed strategies for managing their stress along with administering the stress program**.**

Culture and work environment: It is recommended by Sales (2013) that proper synchronization between the adoption of strategies and cultural issues is important to counter stress problems (Waters and Ussery, 2007). As a result, devising effective stress management strategies should consider cultural-specific issues to make it effective.

2.9 Cost

Selecting the most practical and viable strategy to cope with stress also depends upon the cost-benefit analysis. Prior to selecting the best strategy, it is important to scrutinize strategies with benefits (Quah and Haldane, 2007) as well as its implementation costs

(Protector *et al.,* 2009). Three cost dimensions for selecting the right strategy for reducing stress include:

Cost of implementation: This is the expenditure of the implementation of the strategy (Proctor *et al.,* 2009). It has been emphasized by. The cost of practice and the implementation process at the time of determining resource allocation needs to be considered closely.

Cost effectiveness: This is basically a tool which is used to compare the cost as well as health impacts of the intervention measure and then determine as to whether this intervention is justifying the cost incurred. Alternatives can be free of cost, provided that someone is aware about the techniques involved in using it (Proctor *et al.,* 2009).

Employer cost of extra stress: The cost of stress reduction programs are relatively lower in comparison of the employer's cost which incurs in case employees become overstressed. Major costs involved in this process include medical treatment cost, life and health insurance costs, lost workday costs, workmen compensation costs, lost opportunity costs, replacement costs and impaired productivity costs.

2.10 Conceptual Framework
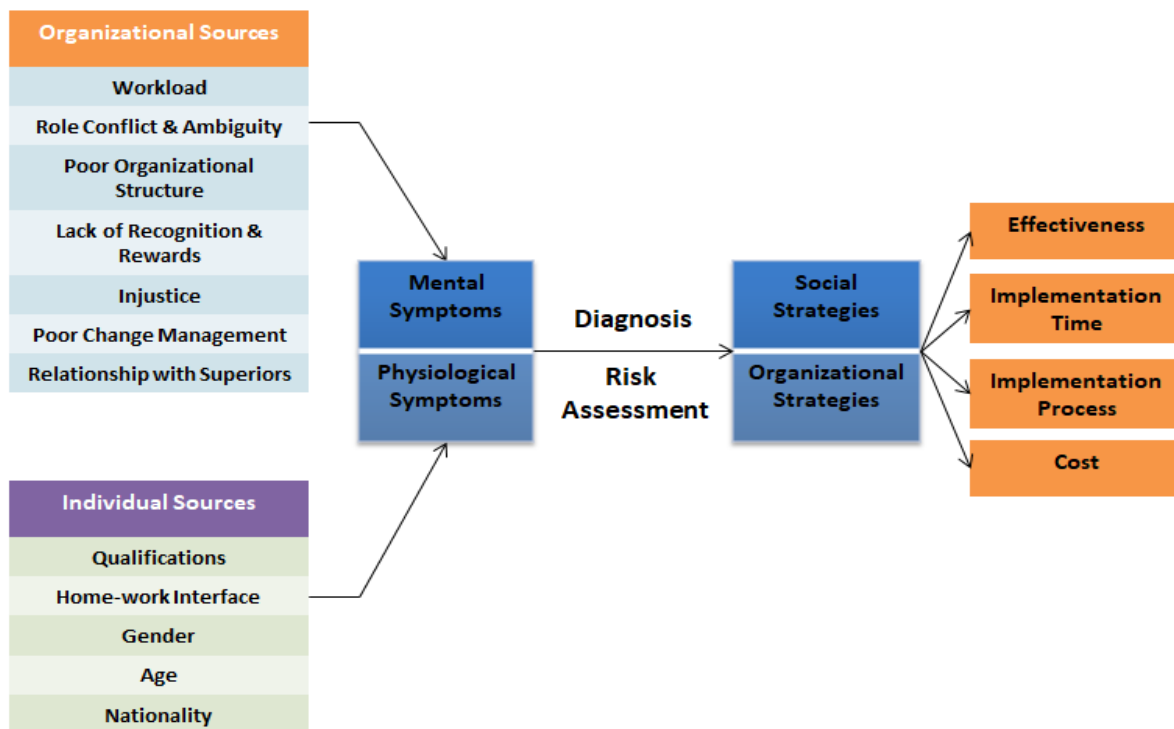
Figure 3: Conceptual Framework
(Source: Writer Elaboration)

The figure above represents the main keywords and ideas presented in the literature review chapter. The purpose of this framework is to link all the stress-related causes and outcomes in one frame in order to be able to measure it in Kahramaa. The work stress in Kahramaa is measured in accordance with the above keywords using the Multiple Criteria Decision Making discipline (MCDM). It was also analyzed using the Analytic Network Process (ANP). The above diagram links the literature review representation of ideas with the model development of ANP. This should eventually formulate the research recommendations to Kahramaa.

CHAPTER 3: METHODOLOGY

This chapter presents the proposed approach for data collection and analysis. As explained earlier, the research will be weighting the alternative for stress management in Kahramaa customer service department using the Analytical Network Process (ANP) to help in the Multi-Criteria Decision Making (MCDM). The sections below explain the ANP process, the model development, and the way the research is going to analyze the results and present the appropriate recommendations to Kahramaa management.

3.1 Multiple Criteria Decision Making (MCDM)

Multi-Criteria Decision Making is a discipline that deals in the selection of best alternatives from several choices. MCDM is gaining significant importance and is considered to be a potential tool for evaluating real complex problems because of its inherent ability to judge various alternatives over different criteria to select the most suitable alternative (Xu and Yang, 2001). The main aspect of MCDM is that almost any alternative can be assessed over the basis of its attributes. To evaluate an alternative, a set of criteria is set up for every attribute upon which it is analyzed. Many times criterions conflict with each other, and MCDM is the perfect way to resolve this conflict.

MCDM is often conducted through the Analytic Network Process (ANP) and Analytic Hierarchy Process (AHP) by the decision-makers. Saaty developed AHP in the year 1980 (Lee et al., 2009; Das & Chakraborty, 2011). It was satisfactory for a period of time until it was not able to deliver complexed results because of its hierarchal nature. Therefore, Saaty introduced the ANP which enables decision-makers to add various elements in their models.

3.2 Analytic Network Process (ANP)

A popular method for solving multi-criteria decision-making problems is the Analytic Network Process (ANP). Analytical Network Process (ANP) is an extension of AHP which does not require a problem to be structured in a hierarchical manner (Faisal and Banwet, 2008). Additionally, ANP also includes decision making elements, feedback, as well as interdependent associations. ANP has several advantages, which include interaction analysis use and hierarchical decision network along with feedback and dependencies, which are synthesized through the application of a single application procedure (Sarkis and Sudarraj, 2002).

The various elements in the network of ANP can be related in many ways. This means that ANP can integrate feedback, relationships between the clusters. The idea of ANP is simple. It links all the elements in all the clusters and then describes the influence of each element of the other through the supermatrix.

Lee *et al., (*2009) described the process of developing the ANP model in four main steps as follows:

1. *Model Construction:* In this phase, the problem under investigation is redesigned and reconstructed into a network. The elements are classified into components and the elements in each component can be related to any other element inside the component itself or in other components.

2. *Pairing and Prioritizing:* in this phase, the elements are compared pair-wisely. The way in conducting such prioritization is similar to the process in the Analytical Hierarchy Process (AHP).

3. *Supermatrix Transformation:* the supermatrix is a divided table in which each segment presents the relationship between two different components. The prioritization is entered in the table this phase.

4. *Final Prioritization:* when all the network elements are covered in the supermatrix, the final elements prioritization will be found in the correspondence columns in the limit supermatrix. To get the final priorities, sometimes additional calculations should be made if the supermatrix includes only interrelated components.

3.3 Model Development

This section in the methodology discusses the development of the ANP model criteria for selection of stress reduction strategy in Kahramaa. The literature review and scholars' representation of the elements that might affect decision making in stress reduction are many. The literature review was designed to explain to the reader the different factors and elements which need to be considered when planning stress reduction. The ANP network in this study is classified into three layers. The first layer represents the goal of the analysis, which is selecting the most appropriate stress reduction strategy. The second layer includes the criteria which the decision will be based upon. Those criteria include sub-criteria as well, which defines each of them. The final layer represents the alternatives. The following figure and sections explain each layer and its components.

3.3.1 Model Components and Layers
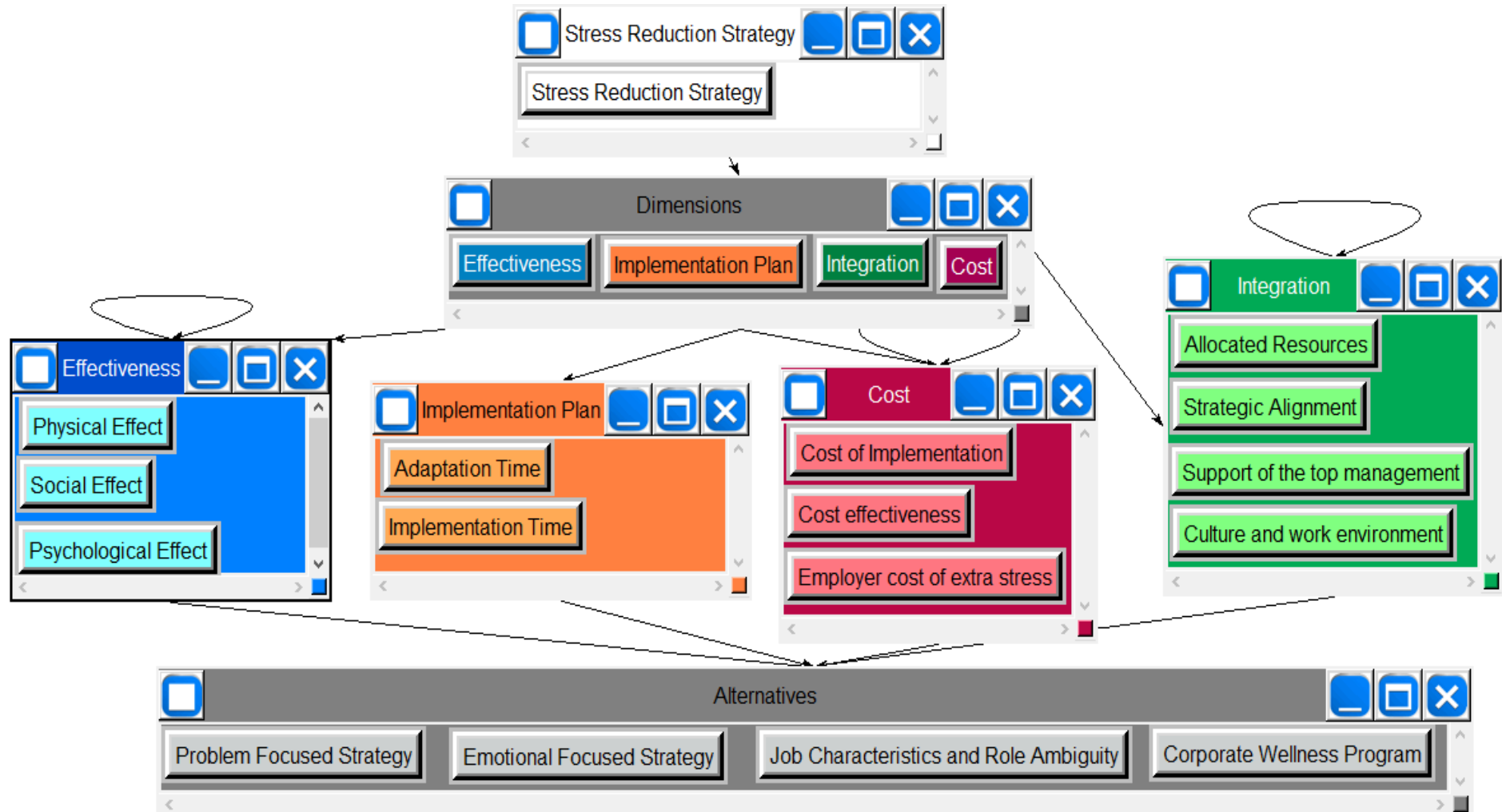
Figure 4: Kahramaa Stress Management MCDM Components

The research aim is to decide which strategy is the most appropriate strategy to be selected for stress reduction in Kahramaa. The research presented four different strategies which were grouped into social strategies, which include problem-focused solutions and emotion-focused solutions. The second group is organizational strategies, which include job characteristics and corporate wellness programs. The four different strategies are applicable, beneficial, and with many pros and cons as presented earlier in the literature review. To successfully assess the best strategy, the study developed the model shown in figure 3 above. The sections below explain each component of the model.

3.3.2   Goal

To select the most appropriate stress reduction strategy for Kahramaa customer services department.

3.3.3   Criteria

The literature review and scholars suggested that stress reduction can be performed in various methods and through many strategies. However, considering the most important strategies that might suit the case of Kahramaa was the point. Therefore, the criteria for choosing the most appropriate strategy were divided into four main groups and twelve different criteria as shown in the table below. The table explains the criteria, sub-criteria, and its preferred stress reduction strategy. The number of X(s) next the criteria indicate the degree of value of it in the selected strategy.

3.3.4   Alternatives

The alternatives of this network analysis are four as follows:

1. ***The problem focused strategy:*** it focuses on promoting and applying problem-solving skills to review and monitor the effectiveness and implementation of stress reduction strategy.

2. ***The emotional focused strategy:*** it focuses on promoting self-esteem and sense of belongings by providing tangible support which may involve services and aids in the time of need.

3. ***Job characteristics and Role ambiguity:*** it depends on refining work scope, presents a well-designed work procedure and clear job description to avoid confusion.

4. ***Corporate Wellness Program:*** it focuses on promoting personal skills and employee health through effective organizational culture and advanced method of internal communication.

Table 3: Comparing Stress-Reduction Strategies (Source: Writer Elaboration)

Criteria	Sub-Criteria	Problem Focused Strategy	Emotional Focused Strategy	Job Characteristics and Role Ambiguity	Corporate wellness Program	References
				Preferred Strategy		
Effectiveness	Physical Effect	+		++	+	Bennion *et al,* 2018
	Social Effect	++	++	++	+	Baer, 2003
	Psychological Effect	+	++	++	+	Grossman *et al.,* 2004
						Shane, 2010
						Shen, 2009
Implementation Plan	Implementation time	++	++	++	++	Slater and Oslon, 2001
	Adaptation time	++	++	++	++	Thompson and Strickland, 2009
						Plugge *et al.,* 2016
Integration	Allocated resources	++	+	++	++	Sales, 2013
	Strategic alignment		+	++	+	Mellor *et al.,* (2013
	Support of the top management	++	++	++	++	Waters and Ussery, 2007
	Culture and work environment	+	+	++	++	
Cost	Cost of implementation	++		++	++	Quah and Haldane, 2007
	Cost effectiveness	++		+	+	Protector *et al.,* 2009
	Employer cost of extra stress	+	+	+	+	

Chapter Four: Research Results

In this chapter, the research tends to respond to the selected criteria relative weighting using pairwise comparison. Pairwise comparisons have been compared using the 1-9 scale. The equal importance of the two components is indicated using the score, 1, and a single element overwhelming dominance is given a score of 9. This dominance is based on the comparison of the other being considered (row component) over the comparison element (column component) (Percin, 2010).

As compared to the comparison component, if the one component influence is weaker, the score would be from 1 to 1/9, where 1 presents the indifference and the 1/9 representing the overwhelming dominance of the column component over the row component. The following tables in the section below represent the pairwise comparisons.

The pairwise comparison presented in this section will cover the cost-effectiveness, social effect, implementation time, and management support. There were considered to be the main four influencing dimensions related to alternatives.

4.1 Cost-Effectiveness and Alternatives

Table 4: Cost effectiveness" node in "Alternatives" cluster

	Corporate Wellness Program	Emotional Focused Strategy	Problem Focused Strategy	Job Characteristics and Role Ambiguity	e-vector
Corporate Wellness Program	1	6	4	4	0.57148
Emotional Focused Strategy	1/6	1	1/5	1/5	0.05343
Problem Focused Strategy	1/4	5	1	1	0.18754
Job Characteristics and Role Ambiguity	1/4	5	1	1	0.18754

CR: 0.06981

The table above explains the relative importance of the cost-effectiveness of the alternatives. It can be noted that the corporate wellness program is the most cost-effective alternative compared to other alternatives, while emotionally focused strategy is the least cost-effective. The gap between the alternative with regards to cost-effectiveness means that it is a very critical influencer when it comes to strategic decision making regarding stress reduction.

4.2 Social Effect and Alternatives

Table 5: "Social Effect" node in "Alternatives" cluster

	Corporate Wellness Program	*Emotional Focused Strategy*	*Problem Focused Strategy*	*Job Characteristics and Role Ambiguity*	*e-vector*
Corporate Wellness Program	1	4	4	4	0.54435
Emotional Focused Strategy	1/4	1	1/6	1/4	0.06461
Problem Focused Strategy	1/4	6	1	1	0.18066
Job Characteristics and Role Ambiguity	1/4	4	1	1	0.21038
CR: 0.13041					

The table above explains the relative importance of the social effect of the alternatives. It can be noted that the corporate wellness program has the best social impact, among other alternatives. The corporate wellness program is followed by the job characteristics and role ambiguity as to the second most important when it comes to the social effect of the alternative. Again, emotional focused strategy is the least important in terms of social effect.

4.3 Implementation Time and Alternatives

Table 6: Implementation Time" node in "Alternatives" cluster

	Corporate Wellness Program	*Emotional Focused Strategy*	*Problem Focused Strategy*	*Job Characteristics and Role Ambiguity*	*e-vector*
Corporate Wellness Program	1	4	3	5	0.54330
Emotional Focused Strategy	1/4	1	1/5	1/4	0.06740
Problem Focused Strategy	1/3	5	1	1	0.17840
Job Characteristics and Role Ambiguity	1/5	4	1	1	0.21090
CR: 0.11333					

The table above explains the relative importance of the implementation time among the alternatives. It can be noted that the corporate wellness program also has the best implementation time among other alternatives.

4.4   Management Support and Alternatives

Table 7: "Support of the top management" node in "Alternatives" cluster

	Corporate Wellness Program	*Emotional Focused Strategy*	*Problem Focused Strategy*	*Job Characteristics and Role Ambiguity*	*e-vector*
Corporate Wellness Program	1	5	5	3	0.55862
Emotional Focused Strategy	1/5	1	1/4	1/4	0.06049
Problem Focused Strategy	1/5	4	1	3	0.14786
Job Characteristics and Role Ambiguity	1/3	4	1/3	1	0.23303
CR: 0.15775					

The management support is a critical factor in the success of the stress reduction strategy. The above table shows that management support is more straightforward in the corporate wellness program and job characteristics and role ambiguity. On the other hand, it might not be convenient in emotional focused strategy.

The figure below explains the four factors affecting alternatives through e-vector.
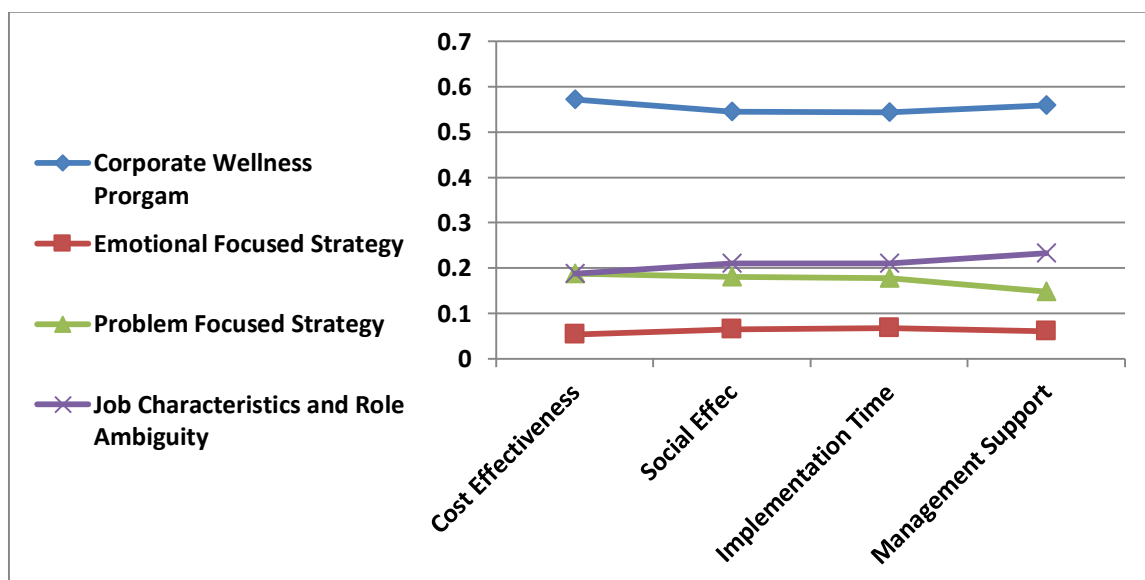
Figure 5: Dimensions affecting alternatives

The four factors chosen for this part of the analysis clearly demonstrate that corporate wellness program is the most suitable alternative for the stress reduction intentions at Kahramaa.

4.5 Factors Prioritization in Dimensions

4.5.1 Prioritizing Dimensions

Table 8: "Stress Reduction Strategy" node in "Dimensions" cluster

	Cost	Effectiveness	Implementation Plan	Integration	e-vector
Cost	1	1/4	1/2	1/2	0.10282
Effectiveness	4	1	4	3	0.54169
Implementation Plan	2	1/4	1	1	0.17216
Integration	2	1/3	1	1	0.18332
CR: 0.01718					

The dimensions prioritization presented in the table above shows that effectiveness is the most important dimension among other dimensions. The second most important is the implementation plan and integration. Cost is very important; however, it is not as important as other dimensions especially when considering long term strategy.

4.5.2 Prioritizing the Cost of Implementation Dimension

Table 9: Comparisons "Cost" node in "Cost" cluster

	Cost Effectiveness	Cost of Implementation	Employer cost of extra stress	e-vector
Cost Effectiveness	1	1/2	3	0.33252
Cost of Implementation	2	1	3	0.52784
Employer cost of extra stress	1/3	1/3	1	0.13965
CR: 0.05156				

The above table shows that employer cost of extra stress is more critical than investing in cost effectiveness and implementation costs.

4.5.3   Prioritizing the Effectiveness Dimension

Table 10: Comparisons effectiveness node in effectiveness cluster

	Physical Effect	Psychological Effect	Social Effect	e-vector
Physical Effect	1	1/3	1/4	0.12601
Psychological Effect	3	1	1	0.41606
Social Effect	4	1	1	0.45793
CR: 0.00885				

The table above explains that the physical and psychological effects are far more important that the social effect. This is specific to short term, as for long term, all effectiveness factors are expected to be equally important.

4.5.4   Prioritizing the Implementation Plan Dimension

Table 11: Comparisons "Implementation Plan" node in "Implementation Plan" cluster

	Adaptation Time	Implementation Time	e-vector
Adaptation Time	1	1	0.50000
Implementation Time	1	1	0.50000
CR: 0.00000			

Both implementation time and adaptation time are equally important.

4.5.5   Prioritizing the Integration Dimension

Table 12: Comparisons "Integration" node in "Integration" cluster

	Allocated resources	Culture and work environment	Strategic alignment	Support of the top management	e-vector
Allocated resources	1	4	5	1/2	0.32082
Culture and work environment	1/4	1	1/2	1/6	0.06854
Strategic alignment	1/5	2	1	1/6	0.09261
Support of the top management	2	6	6	1	0.51802
CR: 0.03943					

The above table clarifies that the support of top management is always mandatory and is the most important factor in the integration dimension. It is followed by allocating the necessary resources for the stress reduction strategy and strategic alignment. The least

important factor in this dimension is the culture and work environment. This is because the stress reduction intends to change somewhat or affect the organizational culture.

4.6 Supermatrix and Selection of Best Alternative

The supermatrix determines the interdependencies occurring among the components of a model in a systematic approach. According to the representation of the decision-maker model, it is a partitioned matrix in which a set of relationships between and within the levels constitute all sub-matrices. The Supermatrix, as shown in Table 13 below, demonstrate the outcomes of the significant comparative measure for every sub-criteria for every main criteria of the best stress reduction strategies. The pairwise comparison matrices of interdependencies have been used to determine the elements of the supermatrix. Seventeen non-zero columns are present in the supermatrix as 12 such pairwise comparisons matrices are present, every interdependent sub-criterion having one. There is a requirement for the supermatrix to be column-stochastic in order to make convergence happen. The sum of each column of the supermatrix has to be one for a matrix to be called column-stochastic. The interdependent relationship can be converged if the supermatrix is raised to the power $2k+1$, where k is equal to an arbitrarily large number.

4.6.1 Weighted

Table 13: Weighted Supermatrix

	CWP	EFS	JCRA	PFS	CEF	CI	ECES	$	E	IP	INT	PE	PS	SE	AT	IT	AR	CE	SA	SM	SRS
CWP	0.00000	0.00000	0.00000	0.00000	0.57148	0.57148	0.57148	0.00000	0.00000	0.00000	0.00000	0.26322	0.51400	0.54435	0.46664	0.54330	0.27486	0.51702	0.47575	0.55862	0.00000
EFS	0.00000	0.00000	0.00000	0.00000	0.05344	0.05344	0.05344	0.00000	0.00000	0.00000	0.00000	0.03616	0.06701	0.06461	0.08519	0.06740	0.03814	0.06191	0.08371	0.06049	0.00000
JCRA	0.00000	0.00000	0.00000	0.00000	0.18754	0.18754	0.18754	0.00000	0.00000	0.00000	0.00000	0.9770	0.20949	0.18066	0.23729	0.17840	0.10238	0.20836	0.29321	0.14785	0.00000
PFS	0.00000	0.00000	0.00000	0.00000	0.18754	0.18754	0.18754	0.00000	0.00000	0.00000	0.00000	0.10292	0.20949	0.21038	0.21088	0.21090	0.08462	0.21271	0.14733	0.23303	0.00000
CEF	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.33252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CI	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.52784	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
ECES	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.13965	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
$	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10282
E	0.00000	0.52000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.52169
IP	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.17217
INT	0.00000	0.18000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.18332
PE	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.12601	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.41606	0.00000	0.00000	0.50000	0.25000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SE	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.45793	0.00000	0.00000	0.50000	0.25000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
AT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
AR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.32083	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CEF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06854	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000
SA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.09261	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000
SM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.51802	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000
SRS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4.6.2 Unweighted

Table 14: Unweighted Supermatrix

	CWP	EFS	JCRA	PFS	CEF	CI	ECES	$	E	IP	INT	PE	PS	SE	AT	IT	AR	CE	SA	SM	SRS
CWP	0.00000	0.00000	0.00000	0.00000	0.5715	0.5715	0.5715	0.00000	0.00000	0.00000	0.00000	0.52644	0.51400	0.54435	0.46664	0.54330	0.54972	0.51702	0.47575	0.55862	0.00000
EFS	0.00000	0.00000	0.00000	0.00000	0.0534	0.0534	0.0534	0.00000	0.00000	0.00000	0.00000	0.0231	0.067	0.06461	0.08519	0.06740	0.07629	0.06191	0.08371	0.06049	0.00000
JCRA	0.00000	0.00000	0.00000	0.00000	0.1875	0.1875	0.1875	0.00000	0.00000	0.00000	0.00000	0.19541	0.2095	0.18066	0.23729	0.17840	0.20475	0.20836	0.29321	0.14784	0.00000
PFS	0.00000	0.00000	0.00000	0.00000	0.1875	0.1875	0.1875	0.00000	0.00000	0.00000	0.00000	0.20583	0.2095	0.21038	0.21088	0.21090	0.16924	0.21271	0.14733	0.23303	0.00000
CEF	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.33252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CI	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.52784	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
ECES	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.13965	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
$	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10282
E	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.52169
IP	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.17217
INT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.18332
PE	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.12601	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.41606	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SE	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.45793	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
AT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
AR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.32083	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CEF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06854	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000	0.00000
SA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.09261	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000	0.00000
SM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	051802	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333	0.00000	0.00000	0.00000	0.00000
SRS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4.6.3 Best Alternative

The table below, table 15, summarizes the outcome for the model. It shows that the corporate wellness program is the best stress reduction strategy for Kahramaa customer service department followed by the problem-focused strategy. The least favorable strategy is the emotional focused strategy.

Table 15: Overall synthesized priorities for the alternatives

Alternatives	Total	Normal	Ideal	Ranking
Corporate Wellness Program	0.172	0.5316	1	1
Emotional Focused Strategy	0.0216	0.0667	0.1254	4
Job Characteristics and Role Ambiguity	0.0629	0.1944	0.3658	3
Problem Focused Strategy	0.0671	0.2073	0.3899	2

CHAPTER 5: CONCLUSION

This research investigated the issue of work stress. It first described the concept of work stress and the factors leading to it from an organizational point of view and intrinsic factors that are related to the employee himself. The research also explained stress reactions, symptoms, and methods to diagnose those symptoms. The research aims were to evaluate and compare various stress reduction management that would work for the case study of Kahramaa Customer Service Department.

In order to achieve this aim, the research used the Multiple-Criteria Decision Making Model (MCDM) and Analytical Network Process (ANP) as an analysis tool. The process was aiming to compare and choose the best strategy out of four different stress reduction strategies which are problem-focused strategy, emotional focused strategy, job characteristics and role ambiguity strategy, and corporate wellness program. The study focused on the prioritization of those strategies by assessing the criteria and sub-criteria of each of the dimensions used for the assessment. The criteria importance and relativity were driven by a comprehensive literature review to support the pairwise comparisons using and utilizing experts' and scholars' opinions.

The literature review content analysis and the ANP analysis helped in answering the research questions as follows:

1. *What types of stress are there in the organization?*

Based on the findings of the study and the literature review, it can be stated that the employee can be a victim of many types of stress in the workplace. The types can be categorized into two major types, mental and physical. The mental stress can have cognitive symptoms, emotional symptoms, and behavioral symptoms. The physiological stress can cause physical problems such as a reduction in immunity, musculoskeletal disorders, cardiovascular problems, muscle stiffness, backaches or headaches, weight gain or loss, muscle stiffness, and tension. Both types are critical and vital to both the employee and the employer. However, the mental stress is harder to diagnose and thus, it is harder to manage and retrieve.

2. *What are the different effective strategies for stress reduction and minimization?*

Scholars have identified a large number of strategies to overcome work stress. Some are very straightforward strategies, such as recruiting more employees. Other strategies cover a wider range of elements and serve bigger purposes. The most effective strategies for stress

reduction are social support strategies, problem-solving strategies, HR strategies, and environmental strategies.

3. What are the most important criteria for stress reduction strategy selection?

Many scholars focused on four main criteria for stress reduction strategy selection. The most frequently mentioned criteria and dimensions are the 1) effectiveness of strategy, which includes the physical effect, social effect, and psychological effect. 2) The implementation time and adaptation time. 3) The cost of implementation, cost-effectiveness, and employer cost of extra stress. 4) The integration includes allocating resources, strategic alignment, support of the top management, and culture of the work environment.

4. What is the optimal strategy selection for stress reduction using MCDM model?

The ANP analysis shows that the corporate wellness program is the most effective and optimal strategy for stress reduction for Kahramaa Customer Service Department employees. The corporate wellness program received the highest scores among other strategies based on the criteria selection and prioritization.

5.1 Research Limitations

The research used a scientific approach to meet its aims and objectives. All the research questions were sufficiently answered. However, it would have been more helpful to conduct a primary research method to collect data from Kahramaa employees as a case study audience. This would have enriched the ANP analysis conclusion. Some may argue that this will make the research narrowed to a particular group of people and may not be applicable to other organizations. That is why this primary research method was not used. In addition, conducting such research in a government organization is not an easy process to be approved. The human resources department in Kahramaa usually controls it.

REFERENCES

1. Ackfeldt, A. & Malhotra , N. (2013). Revisiting the role stress-commitment relationship: can managerial interventions help? *European Journal of Marketing*, 47 (3). 1-37.

2. Addae, H. (2006). Stress at work: Lineer and curvilinear effects of psychological, job, and organization-related factors: An exploratory study of Trinind and Tobago. *International Journal of stress management*. 13(4). 476-479

3. AFT (2017). *What is workplace stress?* New Jersey: AFT Health and Safety Program.

4. Anshel, M. H. (2000), 'A conceptual model and implications for coping with stressful events in police work.', *Criminal Justice and Behavior*. 27(3) 375–400.

5. Arrman, N., and Bjork, E., (2017). The causes and effects of occupational stress in the construction industry. Gothenburg: Chalmers University.

6. Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*. 10 (2). 125–143.

7. Bano, B., & Jha, R.K. (2012) Organizational Role Stress Among Public and Private Employees. The Lahore Journal of Business. 1 (1), 23-36.

8. Bennion, E., Olpin, M. N. and DeBeliso, M. (2018). A comparison of four stress reduction modalities on measures of stress among university students.', *International Journal of Workplace Health Management*. 11(1). 45–55.

9. Blaug, R., Kenyon, A., and Lekhi, R., (2007). Stress at Work: A report prepared for the Work Foundation's Principle Partners. Retrieved online from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.610.5243&rep=rep1&type=pdf

10. Butts, M.M., Vandenberg, R.J., DeJoy, D.M., Schaffer, B.S. and Wilson, M.G., (2009). 'Individual Reactions to High Involvement Work Processes: Investigating the Role of Empowerment and Perceived Organizational Support. *Journal of Occupational Health Psychology*. 14(2). 122–136

11. CAPE (2012). Stress in the workplace: Causes, effects, and how to cope. *Canadian Association of Professional Employees*, 8(1).

12. Chandola, T., (2010). *Stress at Work*. London: Repropoint – The British Academy.

13. Colligan, T. W. & Higgins, E. M. (2005). Workplace stress: Etiology and consequences. Journal of Workplace Health, 21(2). 90-97.

14. Collins, A. M., Hislop, D. and Cartwright, S. (2016). Based Colleagues and Supervisors. *New Technology, Work And Employment*. 31 (2). 161–175.

15. Cox, T. and Griffith, A., (2010). Work-related stress: a theoretical perspective.In Leka, S. and Houdmont, J. (eds.),Occupational Health Psychology, Chichester, Wiley-Blackwell, 2010

16. Cox, T., Griffiths, A., and Rial-Gonzalez, E., (2000). *Work-related stress*. Belgium: Eurpoean Agency for Safety and Health at Work.

17. Das, S., and Chakraborty, S., (2011). Selection of non-traditional macining processes using anaytical network process. *Journal of Manufacturing Systems*. 30. 41-53.

18. Davis-Laack, P. (2017), *Organizational Strategies That Promote Well-Being And Reduce Burnout*, *Forbes*. Available at: https://www.forbes.com/sites/pauladavislaack/2017/03/06/organizational-strategies-that-promote-well-being-and-reduce-burnout/#6f4c99fc73fb.

19. Divakar, J.B., (2015). Factors leading to work stress and its impact on employee performance. Dublin Business School.

20. Ebert, D.D., Heber, E., Berking, M., Riper, H., Cuijpers, P., Funk, B. and Lehr, D., (2016). Self-guided internet-based and mobile-based stress management for employees: Results of a randomised controlled trial. *Occupational and Environmental Medicine*. 73(5). 315–323.

21. Fink, G., (2017). Stress: Definition and Histroy. *Reference module in Neuroscience and Biobehavioral Psychology, Elsevier*. 1-9.

22. Fonkeng, C., (2018). Effects of job-stress on employee performance in an Enterprise. Cameron: Centria University of Applied Sciences.

23. Gharib, M., Jamil, S.A., Ahmad, M., and Ghouse, S., (2016). The impact of job stress on job performance: A case study on academic staff at Dhofar University. *IJER Serials Publications, 13*(1), 21-33.

24. Greubel, J., and Kecklund, G., (2011). The impact of organizational changes on work stress, sleep, recovery and health. *Industrial Health, 49*, 353, 364.

25. Grossman, P., Niemann, L., Schmidt, S. and Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of psychosomatic research*. 57 (1). 35–43.

26. Grossmeier, J. (2018). The Art of Health Promotion: Ideas for improving health outcomes. *American Journal of Health Promotion*. 32(4). 1145–1156.

27. Harris, A.R., Jennings, P.A., Katz, D.A., Abenavoli, R.M. and Greenberg, M.T. (2016), 'Promoting Stress Management and Wellbeing in Educators: Feasibility and Efficacy of a School-Based Yoga and Mindfulness Intervention', *Mindfulness*. 7(1). 143–154

28. Idham, R., Mat, Y., Adli, A., Abdula, L., and Irzan, I., (2014). The impact of work stress towards work life balance in Malaysia. *International Journal of economics, commerce and management*, 11(11).

29. ILO (2016). Workplace stress: A collective challenge. International Labour Organization. Retrieved online from: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_466547.pdf

30. Ipsen, C., and Jensen, L., (2010). Causes of work-related stress and individual strategies in knowledge work. Lyngby: DTU: Management.

31. Jehangir, M., Kareem, N., Khan, A., and Soherwardi, S., (2011). Effects of job stress on job performance and job satisfaction. *Interdisciplinary journal of contemporary research in business, 3*(7), 453-465.

32. Judge T. A. and Colquitt J. A. (2004). Organizational justice and stress: the mediating role of work-family conflict. *Journal of applied psychology*. 395-404.

33. Karanges, E., Johnston, K., Beatson, A. and Lings, I. (2015). The influence of internal communication on employee engagement: A pilot study. *Public Relations Review*. 41(1). 129–131.

34. Kazmi, R., Amjad, S., & Khan, D. (2008). Occupational stress and its effect on job performance a case study of medical House Officers of district Abbottabad. J Ayub Med Coll Abbottabad, 20(3).

35. Kossek, E. E., Kalliath, T., Kalliath, P. (2012). Achieving employee wellbeing in a changing work environment: an expert commentary on current scholarship. *International Journal of Manpower*, 33(7). 738-753

36. Kotteeswari, M., and Sharief, T., (2014). Job stress and its impact on employees' performance. *International Journal of Business and Administration Research Review, 2*(4), 18-25.

37. Kushwaha, S., (2014). Stress Management at Workplace. *Global Journal of Finance and Management*, 6(5), 469-472.

38. Lee, H., Lee, S., and Park, Y., (2009). Selection of technology acquisition mode using the analytical network process. *Mathematical and Computer Modelling*. 49. 1274-1282.

39. Leka S, Griffiths A. & Cox T. (2005). Work Organisation and stress: systematic problem approaches for employers, manager and trade union representatives: World Health Organization

40. Lin, B.C., Kain, J.M., & Firts, C. (2013). An Examination of the Relationship Between Instructions at Work and Employee Strain. *Journal of Stress Management*.1 (28), 1-19.

41. McVicar, A., Munn-Giddings, C., See bohm, P. (2013). Workplace stress interventions using participatory action research designs. *International Journal of Workplace Health Management*. 6(1), 18-37.

42. Mellor, N., Smith, P., Mackay, C. and Palferman, D. (2013). The "Management Standards" for stress in large organizations.*International Journal of Workplace Health Management*, 6(1), 4–17

43. Michie, S. (2002). Causes and management of stress at work. Journal of Occupational and Environmental Medicine, 59(1), 67-72

44. Mustafa, M., Illzam, E.M., Hashmi, M., Sharifa, A., and Nang, M.K., (2015). Causes and Prevention of Occupational Stress. *Journal of Dental and Medical Sciences, 14*(11), 98-104.

45. Okeke, M., Echo, O., and Oboreh, J.C., (2016). Effects of stress on employee productivity. International Journal of Accounting Research, 2(11), 38-49.

46. Padyab, M., Backteman-Erlanson, S. and Brulin, C. (2016), 'Burnout, coping, stress of conscience and psychosocial work environment among patrolling police officers.', *Journal Of Police And Criminal Psychology*. 31(4), 229–237

47. Panigrahi, A., (2016). Managing stress at workplace. *Journal of Management Research and Analysis*. 3(4), 154-160.

48. Park, J., (2007). Work Stress and Job Performance. Statistics Canada. Retrieved online from: https://pdfs.semanticscholar.org/2e57/013a0815a4be2dd7e11048fea8f61af321e2.pdf

49. Plugge, A., Borman, M. and Janssen, M. (2016). Strategic manoeuvers in outsourcing arrangements: The need for adapting capability in delivering long-term results. *Strategic Outsourcing: An International Journal*, 9 (2) 139–158

50. Proctor, E. K., Landsverk, J., Aarons, G., Chambers, D., Glisson, C. and Mittman, B. (2009). Implementation research in mental health services: an emerging science with conceptual, methodological, and training challenges. *Administration and Policy in Mental Health and Mental Health Services Research*, 36 (1) 24–34.

51. Quah, E. and Haldane, J. B. S. (2007). *Cost-benefit analysis.* 5th Editio. Routledge

52. Sales, B. D. (2013). *The professional psychologist's handbook.* New York, NY: Springer Science & Business Media

53. Sarkis, J. and Sundarraj, R. P. (2002). Hub location at Digital Equipment Corporation: A comprehensive analysis of qualitative and quantitative factors. *European Journal of Operational Research*, 137(2), 336–347

54. Shahsavarani, A., Abadi, E., and Kalkhoran, M., (2015). Facts and theories through Literature Review. *International Journal of Medical Reviews, 2*(2), 230-241.

55. Shane, J. M. (2010). Organizational stressors and police performance', *Journal of Criminal Justice*. 38 (4), 807–818

56. Shen, Y. E. (2009). Relationships between self-efficacy, social support and stress coping strategies in Chinese primary and secondary school teachers. *Stress and Health*, 25 (2), 129–138

57. Slater, S. F. and Olson, E. M. (2001). Marketing's contribution to the implementation of business strategy: An empirical analysis. *Strategic Management Journal*, 22 (11), 1055–1067

58. Thompson, A., Jr. and Strickland, A., I. (2003). *Strategic management- concepts and cases*. 13th editi. Chicago, IL: McGraw-Hill/Irwin

59. Vijayan, M., (2017). Impact of job stress on employees' job performance. *Journal of organization and human behaviors, 6*(30), 21-29.

60. Waters, J. and Ussery, W. (2007). Police stress: History, contributing factors, symptoms, and interventions. *Policing: An International Journal of Police Strategies & Management*, 30 (2) 169–188

61. Xu, L., and Yang, J. (2001). *Introduction to MultiCriteria decision making and the evidential reasoning approach*. UK: Manchester School of Management.