

ANGLIA RUSKIN UNIVERSITY

FACULTY OF HEALTH, EDUCATION, MEDICINE
AND SOCIAL CARE

PERCEIVED JOB STRESS AND JOB
SATISFACTION AMONG INTENSIVE CARE
NURSES IN THE KINGDOM OF SAUDI ARABIA

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ABSTRACT

Background: This thesis explores the phenomena of job stress and job satisfaction among Intensive Care Unit (ICU) nurses in a multicultural nursing workforce at two main hospitals in the Kingdom of Saudi Arabia.

Aim: To explore sources of perceived job stress and satisfaction among expatriate ICU nurses in a multicultural nursing workforce in two hospitals in Riyadh, Kingdom of Saudi Arabia.

Methods: The research applied a mixed-methods design. Stage 1 (quantitative) distributed a survey to all expatriate ICU nurses employed by the hospitals; 421 (60%) responded. Participants completed the Critical Care Nursing Stress Scale (CCNSS), the McCloskey/Mueller Satisfaction Scale (MMSS), and demographic questionnaires. Stage 2 (qualitative) consisted of semi-structured interviews with 19 intensive care nurses recruited from stage 1 respondents.

Findings: Overall, the CCNSS identified a moderate level of work-related stress. Closer analysis however identified workload factors, lack of appreciation/respect /support from managers, and negative interprofessional factors, especially with physicians, as being strong sources of stress. Nurses with a Bachelor's degree had highest stress scores suggesting an educational influence. Overall, the MMSS identified a moderate level of job satisfaction but closer analysis identified specific strong sources of dissatisfaction related to 'Extrinsic rewards' in particular 'Salary', 'Vacation' and 'Maternity leave'. Married nurses scored lower on job satisfaction suggesting a need for further work on personal/social factors.

Qualitative findings corroborated quantitative outcomes but also extended insights by identifying adverse nurse/patient ratios, expectations around meal times, and cleaning beds, floors and equipment, as important sources of stress and dissatisfaction. Additional sources were cultural; expatriate nurses reported discrimination of salaries and benefit packages based on nationality and gender. Female nurses felt discriminated against by KSA society inside and outside the hospitals.

Conclusions: The study makes a valuable contribution to understanding job stress and dissatisfaction among migrant ICU nurses in the Kingdom of Saudi Arabia. This mixed methods design identified strong sources related to work demands, lack of appreciation, recognition of their skills, and respect from managers and physicians, and salary/benefit differentials according to nationality and gender. Regarding the latter, it is of note that since completing this study the regime has introduced unprecedented societal changes, particularly freedom and fairness, which make it important for future work to re-examine present findings in that context.

Keywords: Job stress, job satisfaction, stressors, job related stress, stress, Kingdom of Saudi Arabia, workplace stress, critical care, and intensive care.

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List of Abbreviations

ANCC	American Nurses Credentialing Centre
CBAHI	Central Board of Healthcare Institution
CCNSS	Critical Care Nursing Stress Scale
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CS	Compassion Satisfaction
HDU	High Dependency Unit
HSE	Health and Safety Executive
ICU	Intensive Care Unit
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JCIA	Joint Commission International Accreditation
JD-R	Job Demands-Resources
KSA	Kingdom of Saudi Arabia
MMSS	McCloskey and Mueller Satisfaction Scale
NHS	National Health Services
PICU	Paediatric Intensive Care Unit
PIS	Participant Information Sheet
PTSD	Post-Traumatic Stress Disorder
STS	Secondary Traumatic Stress
UK	United Kingdom
US	United States
WHO	World Health Organisation

CHAPTER ONE

Introduction and Background

1.1 Introduction

This thesis presents a research study into nurses' perceptions of the stress and job satisfaction associated with working in adult intensive care settings in the Kingdom of Saudi Arabia (KSA). The existing literature has demonstrated unambiguous evidence regarding the presence of stress and low job satisfaction between nurses, especially intensive care nurses and there is a rising body of research that reports the causes of stress and critically analyses the most significant stressors for nursing.

Both quantitative and qualitative approaches have been adopted by previous studies in adult settings all over the world. However, most research into job stress has used only quantitative approaches and research on occupational stressors has been under-utilized perhaps because of the more time consuming qualitative methods (Mazzola, et al.; 2011). This study has investigated stress and job satisfaction using both approaches in order to utilise their respective strengths.

This chapter offers an overview of the thesis and explains the background to the research. The aim of the research was to discover in greater depth the stressors that influence work-based stress and job satisfaction and to identify issues surrounding this subject amongst full-time expatriate intensive care nurses working in acute hospitals, in multiple centres in the KSA, which is considered to comprise a unique culture. Utilising a mixed method approach, Stage One of the study involved the use of validated and reliable questionnaires to gather quantitative information about nurses' stress and job satisfaction, whilst in Stage Two; semi-structured interviews were used with the nurses. The intensive care nurses included medical, surgical, neuro, neonatal and cardiac staff.

The chapter concludes with an overview of the structure of the thesis and an outline of each of the chapters that follow.

1.2 Background

Work-related stress, or job stress, are terms which most people are familiar with, but at the same time they are notoriously hard to explain. There are several definitions in the existing literature, with the terms frequently being used to identify feelings of tiredness, suffering and inability to adjust. However, the Health and Safety Executive (HSE, 2017 p4) in the UK defined work-related stress as: "*a harmful reaction that people have due*

to undue pressures and demands placed on them at work.” Regardless of the definition of work-related stress, it is evident that many workplaces, particularly healthcare institutions, are stressful and potentially harmful environments to work in.

Problems at home and in the workplace can subject individuals to stress and pressure. Whilst it is true that in some circumstances pressure can be seen as a motivational factor, pressure can also become stressful when it reaches the stage at which people feel they can no longer manage with it. The ability to cope with stress and the level at which stress becomes harmful to their health varies amongst individuals (HSE, 2013). For many years, work-related stress was not recognized as a cause of illness, and even when it was it was not well understood. Recently, however, work-related stress has slowly come to be acknowledged as a mainstream contributor to job-related ill health and absence. Substantial amounts of research in the UK have emerged to indicate that in healthcare services there is a clear relationship between work-related stress, individual satisfaction, performance and patient safety (Al-Nusair, 2017). Job stress poses a risk to most businesses and compensation payments relating to job stress are increasing.

The average length of time that a person is absent from work because of stress in the UK is 21 days and almost five million people in the UK feel ‘very’ or ‘extremely’ stressed by their work (HSE, 2016). This costs society more than £14.2 billion a year in the health sector, mostly for staff employed in the National Health Service (NHS) (HSE, 2013) rising to £15 billion in 2019 (HSE, 2019). However, due to the increasing awareness of work-related stress and the research conducted in relation to job stress and job satisfaction all over the world and particularly in UK, the estimated number of working days lost per year has fallen from around 39.5 million in 2000/2002 to 27.3 million in 2014/2015. Of these 27.3 million days, 23.3 million were lost because of work-related ill health and 4.1 million were lost because of workplace injuries such as back injury or other medical problems. Employees affected by workplace injuries in UK were absent from work for an average of 17 days each, whilst those affected by work-related ill health were absent for an average of 19 days (HSE, 2016). However, the latest estimated number of working days lost in 2018-2019 has fallen again to 12.8 million days (HSE, 2019). Unfortunately, in the KSA there are no published statistics regarding sickness and absence from work (including the cost of absence), as such information is kept as confidential data by the Ministry of Health.

There is no doubt that there is a global health workforce crisis due to staff shortages (e.g Almutairi, 2012; Nuffield Trust, 2020). A fall in nursing recruitment is an ongoing problem that has been experienced all over the world (WHO, 2013). In addition, the International Council of Nurses (2006), highlighted that many countries (regardless of their economic

status) had fewer student nurses enrolling into the nursing profession worldwide than are critically needed to fill vital vacancies (Al-Nusair, 2017; U.S. Department of Health and Human Services, 2014). Many countries, including the KSA, are faced with challenges relating to a shortage of healthcare workers (Almutairi, 2015). The causes for this crisis are different and complex, but a key factor amongst them is job related stress that can result from a range of factors: unhealthy work environments, poor working circumstances and work policies, low salaries, discrimination, poor communication, physical violence, insufficient remuneration, increased work load, lack of job development and unfavourable work life balance.

There is unambiguous evidence globally that work-stress and poor job satisfaction can have very negative impact on the performance, staffing, retention, and efficiency of any organization, particularly healthcare institutions, that can as a result reflect negatively on the quality of care and on patient outcomes (Al-Nusair, 2017). In contrast, enhancing positive working environments, providing staff recognition measures and social support from work colleagues and supervisors are key workplace-based strategies that can strengthen and support a workforce, thereby creating a positive impact on the quality of care provided, patient outcomes and organizational cost-effectiveness. When these factors are in place and supported by appropriate policies and human resources, they can go a long way to confirming the establishment and maintenance of an active workforce of healthcare professionals and consequently, the overall quality of healthcare systems.

Stress in the work place is a major concern for administrators and managers, particularly those working in healthcare organisations. For that reason, many organizations have increased their focus on reducing work related stress and improving job satisfaction in clinical areas, recognizing that quality of care is essential to both the patients' and the organisation's survival (Azizi, 2009).

Job related stress in the KSA is a major concern in the Gulf region and particularly in healthcare organisations, because it is an issue that appears to have been neglected (Almutairi, 2012). Work related stress policies, measures to enhance working environments, and policies relating to equality in the workplace are not well established in the KSA and are also under-researched. Work related stress has not been taken seriously enough and has been ignored by decision makers; with the result that the extent of the problem is not well defined (Almutairi, 2012).

In the context of this study, it is difficult to generalise findings from other published studies on work related stress due to the unique context, culture, work environments and conditions in the KSA. According to Almalki, et al. (2011), it is unlikely that the findings

of studies conducted outside of the Gulf region and, more specifically, outside of the KSA can be generalised to nurses working in the KSA. This is for a several reasons including the sources of job stress, culture, working conditions and work colleagues, and, most importantly, because of the presence of staff members from different countries that travel to work in the KSA and who have different religions, beliefs and backgrounds (Al-Hosis, et al., 2013). Additionally, there is no similar study that has looked at the same variables that will be explored in this study. The KSA represents a particularly unique cultural working environment, employing a substantial number of expatriate nurses with diverse backgrounds and beliefs in order to satisfy its workforce needs (Al-Nusair, 2017). For these reasons the KSA provides an opportunity to conduct novel research into cross-cultural contexts for nurses, in this instance intensive care nurses.

1.3 Aims and Objectives of the Study

The aim of the research is to identify the level of stress and job satisfaction for nurses working in intensive care units (ICUs) in KSA. To achieve this, ICU nurses working at two main hospitals in Riyadh were asked to participate in this research. The primary aim of the research is to support intensive care nurses by providing data on the issue of job stress and satisfaction in the KSA to decision makers so that they can receive the vital support they need.

The current study uses both quantitative and qualitative study methodologies. The use of a mixed methodology approach will validate and support the findings and results by the complementary use of quantitative and qualitative data (Jones 2002). The first stage of the research includes the use of a quantitative methodology and methods. The quantitative approach identifies the stress and satisfaction phenomena and investigates relationship between the variables by using questionnaires (Polit and Beck 2004). The research questionnaires used were:

- Critical Care Nursing Stress Scale (CCNSS, Sawatzky, 1996)
- McCloskey and Mueller Satisfaction Survey (MMSS; McCloskey & Mueller, 1990)
- Demographic questionnaire

In the second stage of the research, a qualitative method is used, employing interviews to explore participants' points of view in their own words to reveal their own lived experiences (Polit and Beck, 2004). The aim of the qualitative phase is to deeply explore the main stressors that the participants face and the effect that these stressors have on

their stress levels. However, I will return to discuss this in more depth in Chapter Five which explores methodologies and methods.

This study might contribute to improve the phenomena of stress and satisfaction among ICU in KSA and Gulf region as well as will help managers and leaders in the KSA to identify policies and procedures needed to provide healthy work environments and fight the phenomena of job stress and its effect on staff morale, turnover and shortages.

1.4 Thesis Structure

This thesis is composed of eight chapters. It begins by providing the reader with a detailed overview of the background and setting within which the research was conducted. This will help the reader to understand the unique setting for the study and to understand the potential importance of the research. A critical review of the literature follows, allowing the reader to understand the current state of knowledge in relation to job satisfaction and work-related stress. The literature review also helps to demonstrate the uniqueness and originality of the research presented here. An overview of the chapters that follow is given below.

1.4.1 Chapter 2: Local Context

This chapter will help to provide a clear understanding of the context in which this study was conducted. It describes the background to the environment and culture within the KSA, as well as the healthcare system and the structure of critical care units, including the package offers and salaries available to healthcare workers. The chapter concludes by presenting and discussing the critical care services in each of the hospitals in which the research was conducted.

1.4.2 Chapter 3: Literature Review

Chapter Four presents a review of the literature relating to work job stress and satisfaction. The review focuses on stressors and factors connected with work related stress and job satisfaction, and anxiety and depression more generally, as well as work related stress and job satisfaction in critical care units in the KSA. This chapter will help to ensure that the reader has a strong understanding of the current state of knowledge and the gaps in the existing knowledge that this research is seeking to fill.

1.4.3 Chapter 4: Theoretical Framework

Chapter Three examines the theoretical development of the concept of work related stress and job satisfaction. Models of stress, including for example social and medical models, are outlined and discussed. This chapter will provide the reader with a clear explanation of the theoretical framework underpinning the research presented in this thesis.

1.4.4 Chapter 5: Methodology and Methods

This chapter presents and critically discusses the methodological perspectives within which this research was carried out. Philosophical assumptions are discussed and the chapter outlines and discusses justifications for the chosen research methods. In addition, this chapter explains the use of combined qualitative and quantitative approaches in conducting this study, recruitment, methods, ethical implications and data analysis strategy.

1.4.5 Chapter 6: Quantitative and Qualitative Findings

This chapter presents quantitative and qualitative results relating to the levels of work-related stress and job satisfaction amongst intensive care nurses. It also presents the participants' demographic details and describes the statistical tests that were used to carry out the analysis. The chapter goes on to detail participants' views from individual interviews concerning work related stress and job satisfaction.

1.4.6 Chapter 7: Integration of the Findings and Discussion

This chapter will provide the reader with a clear understanding of the quantitative and qualitative findings and the links and relationships between them. Study findings are related to the Job Demands-Resources model, which is revisited and critiqued as to its suitability in this setting in light of new findings from KSA. It will also present an extended discussion of participant's views regarding the phenomena of work stress and job satisfaction in KSA.

1.4.7 Chapter 8: Summary

Finally, Chapter Eight summarises future directions for the study's research results, the strengths and limitations of the research, its qualities, the researcher's reflections and recommendations for future investigation.

CHAPTER TWO

The Local Context

2.1 Introduction

Worldwide immigration is a characterising variable in the organisation of the culture within the KSA and it has become essential to the national economy (Almutairi, 2015). Many people from all over the world (especially from South and Southeast Asia) and from all professions, including nursing, have moved to the KSA to look for better opportunities and income. Migration from many developing countries is now occurring because of the increase in the number of registered, skilled nurses in those countries. Countries that have a thriving financial economy, such as KSA and other Gulf countries, attract nurses from both developed and developing countries (Goh and Lopez, 2016).

According to Gulf Labour Markets and Migration (GLMM, 2015), from mid-2013 expatriates made up 32% of the KSA population, most of them coming from South Asia. They accounted for 56.5% of labourers and 89% of the private sector workforce. The KSA is ranked among the top five migrant destination countries worldwide. Around a quarter of its migrant workers are employed in domestic settings, and Human Rights Watch apprises that nearly 1.5 million women local labourers live in the KSA (GLMM, 2015). The KSA is now facing a crisis in the supply and maintenance of high healthcare professional numbers, especially migrant nurses who form a huge part of the nursing workforce; more than 70% of the general nursing workers in government hospitals and more than 95% of those in private hospitals. It has been estimated that it will require 25 years to train sufficient Saudi Nurses to cover 30% of the nurses needed (Al-Dossary, et al., 2008). It will therefore remain necessary for the foreseeable future to continue relying on an immigrant nursing workforce to meet the needs of the KSA.

The aim of this chapter is to deliver some background and facts on the local context in which this study took place, including the day-to-day practice of nursing care in the critical care units at the study locations. To fulfil this aim, several topics are discussed. Firstly, the history and the development of the KSA, and particularly the development of a healthcare system in the KSA. This is intended to acquaint the reader with some knowledge of the development of a healthcare system in a country where the provision of healthcare faces many difficulties and challenges. Secondly, the organizational structure and organisation of the intensive care units in each of the two hospitals where this research took place is discussed. This includes how intensive care units are managed, manpower challenges, staffing packages and other benefits such as salary, accommodation and travel tickets. Such information and data will supply the reader with

an idea of the flow of work in critical care settings in the KSA and will help to link it to the context in which this research took place. This information will allow the reader to consider these activities in the context of the whole thesis, and to link it with other practices, duties and structural issues related to critical care nursing that will emerge from this research and which are presented in the discussion chapter. Thirdly, the day-to-day nursing activities that take place in adult critical care settings in the KSA are discussed. This chapter starts with an illustration of my personal experience of working in intensive care settings in both the UK and the KSA and how this experience helped me in collecting data relating to the research setting.

Living and working as a nurse in the KSA can be both an interesting and a challenging experience for non-Arabic speaking nurses (Almutairi, 2015). The experience for non-Arabic nurses in the hospital setting can be particularly challenging because of the differences in language, religion and culture between non-Muslim nurses and Muslim patients or their relatives and can lead to frustrations and feelings of inequity amongst the immigrants. These feelings bring stress in dealing with the new changes in lifestyle due to the uniqueness of the Saudi culture and environment (Toh and DeNisi, 2005; Goodwin and Preiss, 2010).

Some might argue that the role of the intensive care nurse can be likened to that of an instrument or machine used to oversee and follow a set of intensive care guidelines; giving medication and a course of treatment from the start of a patient's period of critical care until their discharge from the intensive care unit (Leiter & Maslach, 2009). To counter this image, language and communication skills that will allow nurses to communicate effectively between themselves and their patients must be fundamental to maximizing the effectiveness and compassion of critical care nursing, serving to avoid conflict and enabling the provision of the highest quality of care. Most of the conflict between nurses and other professions results from misunderstandings between the two parties which might affect the safety of patients (Stoetzer, 2010). Intensive care nurses can be described as the vital link for patients who need to be admitted to intensive care setting and who may require organ support (Ulrich, et al., 2006): they act as healthcare advocates by drawing on their knowledge and skills to provide the best possible patient care in the intensive care setting.

Most of the nursing staff at the two hospitals where this study took place were expatriate nurses and had been recruited from many different countries due to the massive shortage of nurses in the KSA (Almutairi, 2012). Each staff member held their own beliefs, values, culture, rules, practices, standards and background; their specific

contractual packages and benefits being based on their nationality and origins, although they all had one thing in common, which was the desire to help and care for others. The expatriate non-Muslim and non-Arabic nurses working in the KSA are required to have a good knowledge of Islamic and Arabic cultures and traditions to allow them to provide culturally sensitive nursing care whilst respecting their patients' beliefs (Almutairi, 2012). Delivering culturally safe nursing care needs sufficient time, expertise and clinical experience in order to refine, develop and expand nurses' awareness of, and ability to, provide such care. Nurses are required, continuously, to become more attentive towards a diversity of languages, habits, beliefs and behaviours (Benkert, et al., 2005). On the commencement of their initial contract there is a lack of knowledge amongst most of the immigrant staff members regarding the new cultures to which they will be exposed (Almutairi, 2015), despite them being advised and asked to prepare themselves by reading about the culture and exploring life in the KSA. A few take the time to Google and investigate the culture, environment and traditions in the KSA while other nurses leave it until they arrive and start living in the KSA to explore and discover the culture over time. This inconsistent and inadequate cultural preparation often leads staff members to perceive issues like stress differently. It can cause existing staff members to feel intolerance towards the newer members of staff when they are asked to support them, which can then be a cause of culture-based conflict and one of the causes of work-related stress. One new coping and adaptation strategy is to form subgroups made up of members of staff of the same nationality, although such subgroups can be perceived by marginal outsiders as cliques that gang up on others (Ramos, 2006).

2.2 The Kingdom of Saudi Arabia

Saudi Arabia is an Arabic country and is one of the wealthiest countries in the Middle East. The capital of the KSA is Riyadh, where this study took place, and other principal cities include Makkah, Madinah, Dammam and Jeddah. It is also the most religious Muslim country as it is the place of the origin of Islam and a place (Makkah) where millions of Muslim pilgrims undertake Hajj (a holy pilgrimage) each year. There is also the holy city of Al Medinah where the Prophet Mohammed, peace be upon him, lies. The KSA covers an area of roughly 2.24 million square kilometres and 95% of it is desert. It has a total population of 27 million, comprising approximately 5.5 million expatriates and has a population growth rate of 1.51%, with a median age of 26 years (The World Factbook, 2014). However, the Central Bureau of Information and Statistics (2013) claimed that in 2012 the Kingdom's total population was 29,195,895, of which the estimated Saudi national population was 19,838,448.

The KSA is a very strict Muslim country and the seat of the most holy places for Muslims, which are Mekkah and Al Medinah. Islam is the sole religion of the Saudi nation (Almutairi, et al., 2012). The importance of religion as an essential part of everyday life means that many Muslim patients view the world, including even their illnesses, health concerns and care, from a religious perspective (Almutairi, et al., 2012). The Saudi law and rules and regulations are controlled by the Sharia law which is based on the Islamic religion. Alcohol is forbidden in Saudi's land and, when this research took place, women were not allowed to drive a car under any circumstances (Almutairi, et al., 2012). In addition, women must cover their body from head to toe and must dress according to tradition when they are out in public, whether they are shopping or working, as it is forbidden to expose any part of their body.

Multiculturalism can be developed and does exist in the KSA. This has been defined as the interaction and mixing of different cultures and is established during the nurse-patient relationship (Richardson, 2005). In this study, biculturalism is linked to the expatriate nurses' interactions with Saudi patients in the KSA. Biculturalism can lead to ethnocentrism i.e. the judgment and comparison of other cultures in relation to one's own culture (Cundiff, Nadler and Swan, 2009) and is most likely to result in a person judging their own culture as superior to other cultures. Ethnocentrism can lead nurses to interpret the actions and behaviours of their patients inappropriately and to judge their patients' beliefs and actions based on their own culture. This can lead to the development of negative attitudes within a multicultural context due to differences in terms of race, culture and religion. These same attitudes can have a negative impact on patients as well as healthcare staff from diverse backgrounds (Almutairi, et al., 2012). Despite recent changes in culture and life style in the KSA in comparison with other countries and cultures, most of the Saudi people are very happy and satisfied with the rules and restrictions within their own culture because they are embedded in their own beliefs in Islam (Almutairi, 2015).

2.3 Healthcare Human Resources in the Kingdom of Saudi Arabia

The KSA has large reserves of oil which were first discovered in 1938 by an American group and were shipped to Bahrain for processing until World War II when, in 1944, the structure of the new Arabian American Oil Company (ARAMCO) was established. It remains the largest producer and exporter of oil in the world. Over the past 50 years there have been dramatic changes in the economy and lifestyle of the Saudi population: prior to the discovery of oil, the Islamic faith and the Muslim people living in the KSA were protected and mostly isolated from the 'Western' world, but post-oil affluence and

trading has exposed the population to modern ideas and technology (Al Nusair, 2017). The sharp rise in both oil prices and production between 1973 and 1974 resulted in the government spending more on public infrastructure projects, including education and improvements to the healthcare system. This has had a positive impact on the request for expert and inexpert labour (Maben, et al., 2010), but at the same time has led the government to rely increasingly on the mass recruitment of foreign workers to sustain these developments. Maben, et al. (2010) have highlighted that there has been a difference in the degree of success in the KSA in terms of the recruitment of indigenous healthcare workers. They suggest that this is partly due to the challenges created by historical, social and religious influences on the participation of women as employees within the healthcare system. The participation of Saudi women and Arabic women in general in the labour market remains the lowest in the world (International Labour Organization, 2015) which makes it a serious problem for nursing, as the majority of nurses are women.

The number of female Saudi workers, including healthcare professionals, is still limited by comparison with other Arabic and Gulf countries because of the restrictions placed on women. The nursing profession is still considered one of the lowliest professions in the KSA and the Saudis (especially females) are deterred from it, as they are keen to avoid working night shifts and working during the weekend (Al-Nusair, 2017). This leads to huge problems and shortages in female nursing as female Saudis refuse to be cared for, or nursed, by male nurses. The nursing profession in the KSA is still not considered in the development of strategic plans in the healthcare sector, even though the lack of Saudi personnel in the field of nursing has been compounded by the growth of population numbers (Abu-Zinadah, 2006). Abu-Zinadah (2006) highlighted that then there was a need for 172,380 nurses in the KSA's nursing workforce, yet only 84,000 indigenous nurses were available. What is particularly surprising is that only 4% of nurses have a bachelor's degree, meaning the remaining 96% only have nursing diplomas. This has led to an increase in the total number of female expatriates moving to the KSA in order to fulfil the need that, for religious reasons, most Saudi females prefer to be treated by female members of nursing staff.

Due to the restrictive rules on their movement and lack of freedom of expression when this research took place, female nationals in the KSA, including nurses, try to avoid working in the KSA, preferring to work in other more 'westernised' environments such as those in the United States of America (USA) and the United Kingdom (UK) (Al Nusair, 2017). Expatriates working in the KSA are also subject to certain levels of insecurity, as employers will often retain their passports or identity papers (Jureidini, 2003). According to Saudi rules, an expatriate employee must leave his or her passport with their employer

and must not leave the country unless they have written permission to do so for a holiday or due to an emergency. The situation for nursing has been exacerbated by terrorist attacks in the Western compounds in the KSA following the second Gulf war against Iraq and the attacks in the USA on September 11th 2001; this resulted in a reduction in interest amongst expatriates to live and work in the KSA (Maben, et al., 2010). A lot of expatriates, including nurses, have left the KSA after the attacks on those living and working in Saudi compounds. However, the government has since made many changes to protect them by providing elevated levels of security by assigning the Saudi National Guard.

The total number of hospitals in the KSA increased from 74 (with 9,039 beds) in 1970, to 338 (with 28,522 beds) in 2005 (Ministry of Health, 2011) to 420 hospitals with a total of 58,696 beds (Ministry of Health, 2013) in 2011. Through its existing strategic plan (2013-2020), the Ministry of Health (MOH) seeks to promote its technology and service provision to a more patient-centred care system. Between 1970 and 2005, the number of nurses also increased from 3,261 to 42,628 (Maben, et al., 2010). The Bachelor's degree in the Science of Nursing (BSN) was introduced in the KSA during 1976 and was then followed by the introduction of a Master's program in 1987 (Mebrouk, 2008). Consequently, the number of Saudi nurses as a proportion of the total nursing workforce rose from 9% in 1996 to 22% in 2008 but it is estimated that another 25 years will be needed to fulfil the required healthcare workforce needs of the KSA's citizens as there are not enough nursing students coming through the system.

Nursing is not the preferred job amongst young Saudi citizens (Aldossary, et al., 2008) because of the salary compared to other professions and due to working patterns involving nights and weekends. The global shortage of nurses has led to an increase in international immigration to the KSA from low income countries such as the Philippines, India, Jordan and some African countries, in particular Egypt (Al-Nusair, 2017). As the number of hospitals in the KSA increased, so the number of nurses increased to 134,632. The nursing workforce at that time was made up of 45,236 Saudi nurses (33.6%) and 89,395 non-Saudi nurses (66.4%) (Ministry of Health, 2011).

It is obvious that the KSA has made huge progress and development in its public infrastructure projects, including education and the healthcare system as witnessed by the massive increase in the number of hospitals and in the healthcare workforce (Al-Hosis, et al., 2013). Yet despite the success of these developments, there are still fundamental issues that need to be addressed, particularly in the provision of nursing care in this growing and culturally diverse and setting.

2.4 Intensive Care Services

This research was conducted in ICUs providing intensive care which has been defined as: *'The care provided to patients who require intensive monitoring and/or the support of a failing organ'* (Critical Care Stakeholder Forum, 2003 p.5). Intensive care as a specialism was first created in Denmark in 1952 during the polio epidemic. Over the last 60 years, technological developments have resulted in major advances in intensive care. For example, advanced life-support machines are now commonly used in all intensive care units. Patients who are critically ill and require close and continuous monitoring are placed in intensive care units where they benefit from technologically advanced machinery as well as knowledgeable and skilful specialist staff.

In Saudi Arabia, as in the UK, intensive care may take place in two main critical care settings:

1. Intensive Care Units (ICUs) deliver the highest level of care for a sick patient who needs support for two or more failed vital organs or who needs advanced assistance (respiratory, cardiac, gastro, hepatic, neuro, etc.).
2. High Dependency Units (HDUs) provide an intermediate level of care for patients who don't require intensive care, but are not well enough to be transferred to a general ward and require further observation, or for post-operative patients who are recovering from major surgery.

Intensive care needs are classified on a scale of 0-3. A patient's classification depends on the severity and complexity of their situation and the level of care that is required to meet their needs. The classification of patient-based situations which are associated with each level of critical care is shown in Table 1.

Table 1: Description of Patient Status in Each Level of Intensive Care (Department of Health, 2000c)

Level 0	Patients whose needs can be met through general ward care in an acute hospital
Level 1	Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the outreach team.
Level 2	Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those 'stepping down' from higher levels of care.
Level 3	Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least two organ systems. This level includes all complex patients requiring support for multi-organ failure.

The majority of the Level 1 patients will receive care in a general ward (Critical Care Stakeholder Forum, 2003). Patients are admitted to a HDU when they require Level 2 critical care and Level 3 patients are always admitted to an ICU to meet the required level of specialist care.

Intensive care patients in the KSA ICUs are fully dependent patients, with intensive care nurses providing all the nursing care. Level 1 and Level 2 patients however can maintain their independence and carry out daily routine activities. Chaboyer and Grace (2003) reported that most of Level 3 patients lose their independence because they are sedated and/or unconscious, and this increases the workload on ICU nurses as patients are then fully dependent on intensive care nurse for their washing, wound dressing, turning, medication administration and other care (Covinsky, et al., 2003). In addition, most Level 3 patients will have developed multiple organ failure and may require kidney support (hemofiltration), cardiac support (inotrope drugs) and advanced respiratory support (mechanical ventilation), as they are unable to maintain their normal breathing pattern (Crocker, 2006). In such situations, the interaction and communication between intensive care nurses and patients' relatives becomes vital, especially when decisions need to be taken about the patient's welfare (Ahrens, et al., 2003). The potential for the situation of intensive care patients to deteriorate quickly and for the intensive care patient to be in a life-threatening situation can cause their families considerable anxiety. Caring for patients' relatives can therefore become an additional responsibility of the intensive care nurses and introduces an additional and significant burden to these nurses. The following section describes the organisation of intensive care settings in the hospitals in which this study was located. To maintain anonymity they are referred to as Hospital A and Hospital B.

2.5 Hospital A

This section provides a brief description of the nature, characteristics, and organisation of intensive care in Hospital A, which is an acute teaching hospital in Riyadh. It provides the highest level of specialist healthcare in an integrated educational and research setting. The hospital is aiming to become a world-leading institution of excellence and innovation in healthcare and it contains a 936-bed tertiary care facility. Hospital A is well recognised and accredited by international agencies. It is accredited by the Joint Commission International Accreditation (JCIA), Magnet, and the Saudi Central Board for the Accreditation of Healthcare Institutions (CBAHI). It is recognised by the American Academy of Continuing Medical Education and benchmarks against several American hospitals.

Hospital A is a significant provider of cancer service in the Gulf region where more than 2,800 patients are treated yearly. The hospital has developed a new cancer unit which is a newly established structure for the care of adult cancer patients. The unit has a mission of providing excellent cancer treatment, education and research by means of integrated team work forged by a vision to become the best international centre for cancer research, prevention and treatment. The hospital and its research centre have a combined total staff of 6,946 persons comprising 63 different nationalities. Within this workforce, 10% (703 staff members) are KSA citizens and 90% are expatriates (including 16% U.S./Canadian and 11% European).

Of the 1,942 members of nursing staff in hospital A, the majority come from Australia, New Zealand, the Philippines, the United Kingdom and Saudi Arabia. Of non-KSA staff, Canadians comprise 18% whilst 11% are from the USA, and the rest of the nursing staff comes mainly from other European countries.

Hospital A has six different intensive care units. Table 2 presents the number of beds and staff in each ICU in Hospital A.

Table 2: Bed and Staffing Numbers in ICUs - Hospital A

Intensive Care Unit	Total census (no. of beds) per unit	Total number of nurses per unit
Medical Intensive Care Unit-C	20	100
Critical Coronary Unit-B	15	84
Surgical and transplant Intensive Care Unit	19	92
Cardiac Surgery Intensive Care Unit	23	117
Paediatric Intensive Care Unit	18	75
Neonatal Intensive Care Unit	9	126

As in any ICU throughout the world, the total number of nurses per shift within Level 3 adult ICUs is more than the total number of nurses per shift in Level 2 settings. This is of necessity due to the variation in nurse-to-patient ratios between Level 3 and Level 2 adult intensive care settings. According to recommendations from the Department of Health (1996), the Intensive Care Society (2012) and the Royal College of Nursing (2014), a one-to-one nurse to patient ratio should be the norm in all Level 3 adult intensive care, although in the event of understaffing this ratio may fall to one nurse for every two Level 3 patients. In Level 2 settings, where the patients' conditions are less severe, a ratio of one nurse for every two or three patients is usual. Because of the intensive care staff shortage in the KSA, sometimes the nurse to patient ratio for Level 3 patients is 1:2, and

for Level 2 patients is 1:3 which increases the workload for nurses and thereby the potential for work-related stress.

As noted earlier, nursing staff in Hospital A are employed from many different countries, each with their own beliefs, religion, morals, values, cultures, norms, practices, standards, specific contractual agreements and benefits. Contractual agreements and benefits offered to nurses working in the KSA are often dependent on the nationality of individual nurses and do not take into consideration qualifications or experience: European and American nurses are well paid compared to nurses from Asia, Africa or the Middle East, even if nurses from Asia or Africa have higher qualifications or greater clinical experience. On the commencement of their initial contracts, there is a general lack of knowledge amongst staff members with regard to the new cultures and lifestyles that they are exposed to, and an under-appreciation as to how different they are from their own (Almutairi, et al., 2012). As noted earlier, consequently, staff members tend to perceive issues differently and in relation to their own cultural frames of reference, which can create intolerance amongst staff and in turn can result in conflict and become a source of stress from the outset (Al-Nusair, 2017).

There are also significant discrepancies in the salaries and benefits offered to staff of different nationalities for undertaking tasks and work. For example,

- A registered nurse from Asia will be recruited on a single status contract which means that they are not allowed to bring their family with them or to visit them whilst living in the KSA, but this does not deter them from coming to the KSA as there is often a lack of suitable employment in their home countries and it is not easy for them to emigrate elsewhere e.g. to the USA or the UK. They will be paid a monthly salary equivalent to 500 GBP (at the time of conducting this research), be provided with shared accommodation (two staff members per room), have 21 days annual leave per year, and be entitled to only one travel ticket to their home every two years.
- A registered nurse recruited from a Middle Eastern country will also be recruited on a single contract, and again it is difficult for them to bring their family with them as they would have to pay for their family's health insurance and forego their entitlement to hospital accommodation in favour of privately rented accommodation. However, they will be paid a monthly salary equivalent to 1000 GBP, be provided with accommodation in the form of a private room, and have an entitlement of 30 days annual leave and one ticket to travel back to their home every year.

- Registered nurses who are recruited from America, Europe, South Africa and Malaysia are recruited on a family contract, will be paid a monthly salary equivalent to 2300 GBP, have an entitlement of 30 days annual leave per year, and receive a family ticket to their home country once every six months or once every year (Al-Nusair, 2017).

Contracts do not take into consideration a nurse's level of experience or qualification; rather they depend entirely on a nurse's nationality. This alone can result in conflict and potential stress between members of staff from different countries (Al-Nusair, 2017).

2.6 Hospital B

Hospital B is also located in Riyadh, the capital of the KSA, and occupies an area of around 500,000 square meters. Hospital B involves of four hospitals providing a total of 1,095 beds:

- Paediatric Hospital: 246 bed capacity
- Maternity Hospital: 236 bed capacity
- General Hospital: 460 bed capacity
- Rehabilitation Hospital: 150 bed capacity

Hospital B is a large medical facility in the KSA and was built at a cost of \$12.3 trillion. Its yearly operating budget is estimated to be \$150 billion for medical and non-medical maintenance and catering contracts.

In addition to the four hospitals listed above, Hospital B includes primary care clinics, a Faculty of Medicine, Medical Centres including the Prince Salman Heart Centre, a Neuroscience Centre, the Prince Sultan Haematology and Oncology Centre and a Specialized Diabetes and Endocrine Centre. According to the ex-Minister of Health, Dr Hamad ibn Abdullah Al-Manie, in his inaugural address, the hospital is expected to treat more than 50,000 in-patients and more than 2,000,000 out-patients annually.

Hospital B has six intensive care units. The table below details the number of beds and staff in each ICU.

Table 3: Bed and Staffing Numbers in ICUs in Hospital B

Intensive Care Unit	Total census (no of beds) per unit	Total number of nurses per unit
Adult ICU	43	198
Neuro ICU	25	113
Neonatal ICU	36	178
Pediatric ICU	35	170
Coronary Care Unit	24	111
Cardiovascular ICU	12	48

Nursing staff in Hospital B are also recruited from different regions and, as with Hospital A, the nurses have different contracts with different salaries and benefits depending on their nationality. The adult intensive care areas within the two hospitals both operate on similar strategies; e.g. Level 3 adult critical care settings provide support using mechanical ventilators and extra support for patients with multiple organ failure whilst the adult high dependency areas (Level 2 adult intensive care settings) allow for specialist monitoring and support for patients with less severe organ failure.

The neonatal care units in both hospitals provide care for babies from new-born to 12 months old. Services include providing advanced respiratory support and support for other organ failures and interventions, including cardiac surgery. The services in the paediatric ICU within the two hospitals involved in this research provide care to patients between the ages of one year to sixteen years old, including advance respiratory support, surgical procedures and support for multiple organ failure.

In the cardiovascular ICU, both hospitals (A and B) provide care and treatment for adult patients following cardiac surgery including valve replacement, coronary artery bypass grafts or any treatment of congenital cardiovascular disease. The two hospitals provide medical coronary care for cardiac patients, including patients with coronary artery vessel disease, post cardiac catheterization, myocardial infarction, and angina and post-stent insertion.

The surgical ICU in Hospital B provides care for patients following any (non-cardiac) surgical procedure including gastro intestinal, orthopaedic, neurological, spinal, liver and tumour removal surgery. The neurological ICU in Hospital B provides care to patients after any neurosurgery and for brain tumours and is also a referral trauma centre.

The layout and structure of all the units was purpose-built to care for critically-ill patients. The units make use of physical partitions rather than curtains to separate the patients' beds and there are some side rooms for isolating infectious patients or those with autoimmune diseases. Except for managers and clinical resource nurses (i.e. nursing clinical educators), most nurses in the two hospitals work 12.5-hour shifts (from 07:00 until 19:00), excluding the time taken for the bedside handovers between shifts. Nurses usually work three to four shifts per week over both weekdays and weekends and rotate between day and night shifts. This was the case for all Level 2 adult intensive care settings that were investigated in the present study. In both hospitals, the nursing handovers occur at the patients' bedsides where the handing-over between nurses would usually entail those nurses coming to the end of their shift explaining the patients'

details to the nurses beginning their shift. The salaries and beneficial packages for nurses in Hospital B are the same as for those nurses in Hospital A (salary, type of accommodation and tickets home).

(see Appendix I). This illustrates the role and daily routines of nurses for staff nurse Band 1 (SN1) and staff nurse Band 2 (SN2), which includes the majority of the nurses who participated in this research.

2.7 Chapter Summary

This chapter has provided contextual information about the KSA and the intensive care settings that have been investigated in this research. The aim of this chapter was two-fold; firstly, the contextual data provides the reader with an insight into the culture and lifestyle within the KSA as well as some insight into the daily practices of adult intensive care nurses and the work flows in these units. This contextual information was particularly beneficial in the analytical and interpretive stages of the research. Secondly, the act of examining the intensive care environments which directly influenced the work-related stress and job satisfaction levels of nursing staff, offered awareness into the variables which would need to be considered when designing a research study to explore the nurses' perspectives on their levels of work-related stress and job satisfaction. For example, informal discussions with some of the head nurses during the negotiations regarding access to the contributors allowed the researcher to identify how many nurses normally work on each shift and allowed scheduling of appropriate times to contact and interview the nurses. Moreover, studying each of the research settings in its own context also assisted the investigator to use the results of the questionnaires to shape the interview questions addressing some elements of work-related stress that were identified. This included the nurses' views and feelings about work related stress in critical care settings within the KSA and how they perceived the value of such feelings and experiences. In this way, the contextual information relating to each of the settings proved to be invaluable for self-orientation as an investigator in the setting where the participating nurses were working and enabled me to identify the issues that should be taken into consideration in designing the research study.

The following chapter presents the subject literature review prior to a theoretical framework applied in this study. This chapter is a very important part of the study because it gives the opportunity to ascertain where the gaps in literature and practice are that will help to identify the research methodology needed to answer the research's aim and objectives.

CHAPTER THREE

Literature Review

3.1 Introduction

This chapter comprehensively investigates and presents a critical analysis of the available literature regarding the phenomena of job stress and job satisfaction among nurses, with a concentration on the intensive care context. It is separated into seven sections; the first gives an overview and description of the definition of stress. The second section discusses the importance of work-related stress. The third section provides an overview of work-related stress in the nursing occupation. The fourth explores stress and burnout in ICU nurses, while the fifth section examine in depth the main stressors. The sixth section critically reviews and explores issues of job satisfaction and in the concluding section the main gaps in and implications of the literature are discussed in detail.

The importance of stress in human life and its universality as a part of human experience have been well recognized (Cooper, et al., 2001; Beheshtifar and Nazarian, 2013). The psychological and biological responses linked with stress are supportive of adaptation to a challenging situation, but only if that challenge is short-lived (McVicar, et al., 2015). Long-term chronic stress is often associated with ill-health, and work-related stress (WRS) is considered as a severe health problem (Beheshtifar and Nazarian, 2013). One study (Azagba and Sharaf, 2011) estimated that chronic WRS costs the USA approximately US\$350 billion (about £220 billion) each year in lost productivity, healthcare expenses and stress-related lawsuits. In the UK, estimates suggest that 40% of staff sickness in the NHS is linked to stress, depression and anxiety (Rimmer, 2018). Such figure reflects that healthcare professionals regularly suffer from stress owing, amongst other variables, to the working environments found in hospitals (HSE, 2013). Additionally, dealing with suffering, illness and death, nurses confront existential issues daily. These nursing-related issues have a basis in resilience which is linked to human development theory and shattered assumption theory (Regan, et al., 2009). Further, nurses may suffer from stress relating to their own private lives (Al-Nusair, 2017). Individuals vary both in their ability to cope with stress and in the point at which stress becomes unsafe to their health (Oil and Gas producer (OGP), 2014).

More research into the factors which affect WRS and job satisfaction in intensive care settings is needed, in part because of the total cost of stress and the associated high

rates of sickness (HSE, 2013). This is especially the case in the setting of healthcare systems in which WRS is ignored, such as in the KSA (Almutairi, 2015). When it is taken into consideration that the Saudi healthcare system is mainly operated by non-Arabic health professionals from diverse cultural and educational backgrounds with different beliefs and attitudes (Almutairi, 2015), and that the nursing system in Saudi Arabia is modelled on that of North America (except that staff nurses in the KSA have more responsibility both in terms of the number of patients that they care for and in terms of the managerial duties that they have), then the causes of stress become apparent. The extra pressure placed on KSA nurses is also intensified because the country is seeking international accreditation from the Joint Commission on International Accreditation, which means a bigger workload for nurses (Al-Dossary, et al., 2008). The Saudi context and healthcare system were explored previously in greater depth in the Background and Context chapter (see section 2.4).

3.2 Literature Search Strategy

To identify the key research evidence concerning work related stress and job satisfaction amongst intensive care nurses, a detailed and thorough search strategy was constructed focusing on keywords and other inclusion and exclusion criteria. Duplication of keywords searched in individual electronic databases was checked, resulting in the discovery that most of the references were found in every database. This confirmed that the search strategy was well constructed and allowed full access to the extant literature (Aveyard, 2014). Studies relevant to work-related stress were found from initial searches carried out using the following databases:

- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- MEDLINE
- psycINFO - Ovid
- PubMed

The search strategy covered articles using both qualitative and quantitative research approaches published in English initially in refereed journals for the period 2002-2019. The research strategy employed different integration of the variables of job stress satisfaction; this was considered appropriate for the objective of the study because the incidence of the phenomena under investigation has massively increased over the period between these dates and has become one of the most difficult challenges for any healthcare institution. Abstracts for each research study were checked and reviewed for suitability based on the research inclusion criteria.

The search also utilised the Google Scholar search engine. A manual search of journals relating to this study was also conducted in the Anglia Ruskin University library using: *Australian Nursing Journal*, *American Journal of Nursing*, *British Journal of Nursing*,

Canadian Journal of Nursing, and *Journal of Nursing Research*. In addition, manual searches were carried out on the reference lists of the retrieved literature and keywords in Saudi journals, to locate any work not identified by online methods. A critical search was also conducted to explore any potentially relevant material on the Saudi Ministry of Health website. Finally, non-published research (grey literature), such as doctoral theses, reports and conferences were reviewed and checked for detailed data.

Table 4: Search Strategy Keywords Used in the Literature Review

Keywords	Combination
Job stress	Nursing
	Intensive care nurses
	Satisfaction
Job satisfaction	Nursing
	Intensive care nurses
Stressors	Nursing
Job related stress	Intensive care unit
Stress	Intensive care
Intensive care unit	Job stress
	Satisfaction
	Nursing
Kingdom of Saudi Arabia	Nursing
	Intensive care settings
	Culture
Workplace stress	Nursing

3.2.1 Search Criteria (inclusion and exclusion criteria)

The keywords used for searching the databases included: “job stress”, “job satisfaction”, “stressor”, “intensive care”, “workplace stress” and “Kingdom of Saudi Arabia”; these were determined after discussion with supervisors and librarians. Specifying an inclusion and exclusion criterion in database searches allows the research to be replicated in future studies. The inclusion criteria used for this research were:

- 1- English language.
- 2- Abstract and full article available.
- 3- Article published between 2002 and 2019.
- 4- The availability of the article as electronic copy.
- 5- Research and reports about stress and job satisfaction.
- 6- Reports published about stress and job satisfaction

The exclusion criteria used in the method of literature selection were the following:

- 1- Researches and studies not in English language

- 2- Abstract only with no full article available
- 3- Research that discuss the concepts of stress and satisfaction among non-healthcare professionals such as studies discuss stress among bankers, drivers or any other non-healthcare professionals
- 4- Research that was considered weak based on the research specifications such as small number of participants, lack of ethical considerations, published in non-credited or recognised journals

Articles with an abstract that were identified through the database searches were read by the researcher. They were selected for inclusion if they related to job stress, stress and job satisfaction in critical care units.

3.2.2 Search Results

A total of 714 articles were saved from searching the three databases highlighted above. From the abstract of each search result, the researcher identified 81 articles that were highly related to the study and which covered areas including job-related stress, satisfaction, nursing burnout and burnout in critical care (see Table 5)

Table 5: Numbers of Articles Found in the Three Databases Searched

Database	Results
CINAHL	Initial result = 317
	Related to the study = 49
	Total = 49
PubMed	Initial result = 226
	Related to the study = 21
	Total = 21
psycINFO - Ovid	Initial result = 171
	Related to the study = 11
	Total = 11

The majority of the research papers identified in the literature review were British or American, with others from Australia, France, Taiwan, Jordan, the Netherlands, the KSA, Finland and Japan. These papers usually involved original research and were mostly quantitative studies. Nevertheless, the literature also provided references to published books; Government official papers and reports, policies and procedures, conference papers, conference minutes and study observations were also included.

The primary search focused on the papers on the KSA, although this only identified eleven papers. Most of those focused on stress and its effect on retention and turnover in KSA. There were some studies that focused on healthcare system and large number of expatriate nurses in KSA. However, to formulate a complete understanding of the topic literatures from other countries that share same context with the KSA were also discussed.

The inclusion criteria used in the method of literature selection were the following:

- 1- Research focusing on the perception of stress and satisfaction in KSA and other Arab countries specifically in gulf region.
- 2- Research of cultural and religion variables affecting stress and satisfaction in KSA.
- 3- Research that discusses the focus of stress and satisfaction that affect studying nursing among Saudi , their perception of their nursing as profession and the variables that influence selecting nursing as a career.

As mentioned, just eleven papers of the primary researches were conducted in the KSA. Other relevant studies were identified from other Arab countries (Jordan, Egypt, Qatar and Kuwait). They all looked at the level of stress among nurses. However some research possibly was outdated and the changes in economic and social life style since these papers were published could presents new results. Most of the studies were all quantitative (questionnaire) and no studies used mixed method.

3.3 Definition of stress

The existing literature does not currently provide a universally accepted definition of stress. Curtis (1981, p12) defined it as:

“Any environmental situation – and a stressor from any environmental factor – that provokes an adaptive response”.

This quote relates stress to environmental causes only, regardless of any psychological or social causes.

However, stress has also been defined theoretically in other forms, as stimulus and response. The theory behind the stimulus-based model is to recognize the sources of stress (Goodwell, et al., 1986). Stimulus-based definitions have their origins in physics

and engineering, where the focus is on the effect of external forces that result in a demand or reaction and then create distortion (Cooper, et al., 2001). The origin of response-based definitions comes from the work of Hans Selye (1936), a stress physiology pioneer who discovered that stressors can affect and cause negative health symptoms in a generic way, such as those associated with an excessive adrenal response. Since then the definition has been extended to a psychological perspective.

Stress as a response has physiological, psychological and behavioural manifestations resulting from any cause of stress stimulus (Cooper, et al., 1988). Other researchers argue that this definition accepts that the source of work stress and its effects are several and not limited to an event (Jones and Bright; 2001) Therefore, stress is observed, not just as a function of being under pressure in a work context, but rather as a function of a person's whole life situation. Employment (or work-related) stress can be influenced by factors such as organisational structure, climate and environment, role ambiguity, conflict, relationships at work, lack of opportunity for promotion and career development, as well as the home-work interface and interaction (Al-Nusair, 2017). The importance of stress cannot be ignored because it has been connected to physical and psychological problems (Jones and Bright, 2001; Alhamidi, 2006). In that context, both the stimulus and response definitions of stress fail to explain individual differences and the cognitive processes of the individual (Cooper, et al., 2001). Since cognitive appraisal of any given situation represents a greater challenge for some individuals than for others, appraisal is subjective, which suggests the need for further research to explore how stress is experienced by different people in different situations.

Work-related stress has become one of the most severe health issues in the modern world (Lu, et al., 2003, Al-Nusair, 2017) because of its deleterious and multifarious effects: it can decrease the enjoyment of life, lead to cardiac problems including hypertension, have a negative impact on immunity and adversely affect individual physical and mental well-being (Bhatia, et al., 2010). Despite numerous attempts to define work-related stress, no generally accepted definition exists (Brand, 2007). However, this has not had a negative impact on understanding the importance of identifying and managing stress in the workplace. AbuAlRub (2004) suggests that the lack of a clear definition of work-stress may however result in employers and employees being misguided by their own perceptions of the nature and causes of work-related stress. As a result, plans to intervene in stress-related problems could be mismanaged and misdirected.

Current literature suggests differences in the adequacy of definitions relying on the stimulus and response to stress, which has led to the development of a third definition

proposing stress as the consequence of an interaction between a stimulus and response that is defined in terms of an imbalance between the person and the environment (Cox, 1978; Lazarus and Folkman, 1984). Job-related stress was defined by Abu Al Rub (2004, p75) as:

“Any work situation that is perceived by the individual as threatening because of the mismatch between the situation’s demands and the individual’s coping abilities”.

According to the World Health Organisation (WHO, 2009), work-related stress is:

“The reaction individuals may encounter when exhibited with work demands that are not matched to their knowledge and abilities and which challenge their capability to cope.”

Work-related stress in nursing can therefore be identified as physical and/or emotional reactions that happen when a nurse’s capabilities and resources cannot respond adequately to the workload in the clinical area (Nakakis and Ouzouni, 2008; Brunero, et al., 2008 WHO, 2009). In a similar vein, work-related stress has also been defined as a process that manifests itself when the multiple demands of a job exceed the person’s capacity and ability to deal with the situation (HSE, 2011). This contributes to understanding the complexity of stress because different people might have different stressor tolerance levels and might respond to stress in different ways.

The need to tackle stress was recognized in UK legislation under the Health and Safety at Work Act (1974) and the Management of Health and Safety at Work Regulations (1999). An extensive search in the KSA for similar policies or regulations that recognize job stress did not identify any such legislation. Job stress in the KSA is a concern particularly because it appears to have been ignored and neglected, especially in healthcare facilities (Almutairi, et al., 2012). There is however some evidence of the existence of research on work-related stress or the cost of stress among healthcare professionals. This evidence is consistent with the findings of Almutairi and McCarthy (2012); namely the presence of stress among nurses in KSA, high sickness, increased levels of turnover and decreased retention.

In summary, work related stress requires investigation in the KSA as it appears to have been largely overlooked by previous research and even government legislation under the Health and Safety laws. Work stress policies, measures to enhance the working environment and policies on equality are not well established or studied in the KSA. Any

relevant data are confidential and are kept by the Ministry of Health (Al-Nusair, 2017). Saudi health organisation leaders do not appear to take the subject seriously, ignoring practical evidence of stress among nurses in the KSA which has been observed through the mood and the productivity of the nurses, the high sickness rates for nurses and the verbal admissions of nurses themselves: some nurses admit in their exit interview that they are leaving the hospital because of stress related to workload and other stressors. Therefore, the extent of the problem is neither recognised nor defined as it has been in other countries, as enacted for example in the UK's Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001 policies, which are built on previous legislation and are well established in practice. In conclusion, stress is a hugely complex, extended and multifaceted concept that can be difficult to identify, but for the aim of the research presented in this thesis it is defined as: *a stimulus from any stressors (psychological, physiological, behavioural) which leads to threatening and insecure feelings in the individual when the demands are greater than the individual's coping abilities.*

3.4 Work-Related Stress

Since the 1980s, stress at work has become acknowledged as a major contributor to work-related ill-health. Substantial volumes of research have emerged to indicate that there is a strong relationship between work-related stress, individual performance, organisational performance, poor work organisation and subsequent ill-health (Health and Safety Executive, 2007; Goodwin and Preiss, 2010, al Nusair, 2017). Work-related stress poses a risk to most businesses because it can result in increased staff turnover and affect productivity negatively. In addition, compensation payments in the health service are increasing following court cases resulting from medical errors that have occurred when nurses are stressed. Studies have shown that stress is one of the main important reasons for absence from work and stress-related absences are increasing (Health and Safety Executive, 2007; Wheeler and Riding, 1994).

There has been growing interest since the early 1980s in stress research and investigations in the Western world because of the increase in and sources of work-related stress and because of the importance of this phenomenon and its effect on healthcare, reflecting the unprecedented rate of change in all aspects of life (Jones and Bright, 2001; Riahi, 2011). Within the nursing profession in the UK and in Western countries, where the occupation is inherently subject to elevated levels of stress, work related stress has increased and in recent years has become recognised as an important issue (Pettersson, et al., 1995; Riaha, 2011; Francis, 2013). According to the

European Agency for Safety and Health at Work (2011), work related stress is the second highest cause of work-related health problems after backache. According to the recent HSE report, work stress, anxiety, and burnout-related depression are the main causes of long-term sickness absence from the workplace (four weeks or more) in the UK with total number of 602,000 worker suffering from work-related stress, anxiety and depression and total number of 12.8 million working days lost in 2018/19 due to work-related stress, depression and anxiety (Health and Safety Executive, 2019).

Work related stress ranks amongst the most severe health problems in the contemporary world (Beheshtifar and Nazarian, 2013) resulting in staff absence, increased staff resignation and increased expenses, decreased life satisfaction, decreased productivity and patient outcomes. It can cause health problems (including hypertension, cardiac problems, and depression) and decreased satisfaction, all of which can contribute to additional stress for nurses (Bhatia, et al., 2010).

Although it is well reported that the effect of stress on human life and its universality are part of the human experience (Cooper, et al., 2001), stress is an important and real concern because it can negatively affect employees' communication skills, their ability to concentrate, their performance, their sleeping patterns, and their ability to make decisions. All of these can impact on their overall productivity and effectiveness (Cartwright and Cooper, 1997; Jex, 1998; Abd. Malek, 2010). Other studies have suggested that work-related stress in nursing is strongly and negatively accompanying with decreased job satisfaction (Healy and McKay, 1999, Demerouti, et al., 2000; Wolf, 2003; Wu and Norman 2006; Nakakis and Ouzouni, 2008). This is discussed in further detail in section 4.9.

3.5 Work-Related Stress in the Nursing Profession

Nursing is recognised globally as a stressful job by comparison with other professional occupations (Healy and McKay, 1999; Higgins, 2003; Chang, et al., 2005; Watson, et al., 2008; Riahi, 2011). It has been described as an emotionally demanding job that contributes to daily stress interaction (Mann and Cowburn, 2005). The increase in work-related stress in the nursing profession is now recognised as a major problem requiring further investigation and has become an interesting topic for researchers (Pettersson, et al., 1995; Riaha, 2011). There is no doubt that nursing is a stressful job which can lead to burnout and physical illness in a nurse (Martin-Fernandez, et al., 2009), having a negative consequence on the practice and expertise required for patient care in the

workplace (Francis, 2013). For the organisation, stress can result in growing levels of staff sickness, increased staff burnout and increased costs (Martin-Fernandez, et al., 2009, Francis, 2013). All of this can contribute to added stress for nurses and affect the quality of care delivered to patients.

Working as a nurse results in exposure to possibly stressful situations. It is important therefore that nurses can protect themselves, irrespective of nationality, location, training school or even the type of work performed, whether clinical or managerial (Al-Nusair, 2017). Work related stress amongst nurses has been noted as a challenge in healthcare organisations and systems for many years (Menzies, 1960; Mauno, et al., 2016). Furthermore, it is an international phenomenon that has been reported in various countries, including, the USA, the UK, Canada, Germany (Dean, et al., 2009), the Netherlands (Gelsema, et al., 2005), Israel (Glazer and Gyurak, 2008), Singapore (Lim, et al., 2010), Japan (Yamashita, et al., 2012), New Zealand, Australia, the Philippines and Jordan (AbuAlRub and Al-Zaru, 2008). The reviewed literature supports the assertion that stress is a long-standing issue for nurses regardless of their nationality, training, location or the kind of work in which they are engaged (Cox and Leiter, 1994; Aiken, et al., 2002b). Most of the studies and papers reviewed (Clegg, 2001; Happell, et al., 2013; McGrath, et al., 2003; McVicar, 2003; Lambert, et al., 2004b; Chang, et al., 2005) largely identified the same main stressors:

- high workload
- interpersonal relationships and conflict
- patient care analyses
- nursing skills and knowledge
- staff shortages
- limited resources and bureaucratic-political constraints

Despite evidence that work-related stress is an international phenomenon, it is difficult to generalise the findings of studies on the topic to the KSA due to its unique context, including work environment, culture and working conditions (see Chapter 2). This includes the sources of job stress, culture, working conditions and work colleagues, and importantly for the KSA, the presence of staff from different countries that come to the country with a variety of different beliefs and backgrounds (Al-Nusair, 2017).

In the KSA, nursing staff are the biggest group of healthcare workers employed by all hospitals. Because of on-going change and development, hospitals face challenges which necessitate them to deliver high-quality care at lower costs and greater productivity with less manpower and fewer resources. The impact of this on nurses has been

significant and far-reaching. With decreasing numbers of staff to take care of patients, the workload for nurses has increased significantly. There is no doubt that the stress levels of nursing staff increase when the patient:nurse ratio increases (increased workload) without increasing the manpower and resources available to nurses (Riaha, 2011; Al-Nusair, 2017).

Increased stress caused by increased workload within a cost containment strategy has also led to increased overtime and increased staff sickness and turnover (Aiken, et al., 2002a; Abu AlRub, 2004; Al-Nusair, 2017). It is important for nurses to understand these difficulties, to better enable them to exactly diagnose what is required in a flexible manner when confronted with situations such as increased workload and nurse shortages. Self-awareness is essential for nurses to act accordingly using coping mechanisms to face stress if it occurs (Riaha, 2011). Similarly, the elevated level of diversity in the workplace means that effective nurse managers must adapt their style and approach to meet the needs of their nursing team and followers (Al Nusair, 2017). Managers who put their staff first are more likely to find that their staff then put their patients first, consequently improving both performance levels and job satisfaction which, in turn, can lead to reductions in stress levels amongst nursing staff (Al Nusair, 2017).

Nurses are frequently exposed to potentially stressful events and to factors that impact on their delivery of work that are known to cause stress. For example, role conflict, role ambiguity, and excessive work demands can increase stress (Aboshaiqah et.al., 2016). Rhéaune, et al. (2011) highlighted that, because of the time they spend with patients and relatives, nurses experience the greatest levels of work-related stress and the highest levels of physical and psychological strain in comparison to other healthcare professionals. It might be argued that nurses enjoy and love nursing, but nurses will still complain about increased workload and lack of resources. Stress can also develop from other events (stressors) which might include: criticism from senior staff and managers, negligent co-workers, uncooperative and confused patients who might try to leave the intensive care unit or physically attack nurses, and a lack of supervisory support (AbuAlRub and Al-Zaru, 2008; Lin, et al., 2016). Additionally, absence of support offered by healthcare organisations to staff dealing with death and dying, managing conflicts and difficulties, concerns about skills and technical knowledge, dealing with patient care-related issues, and dealing with managers, supervisors and medical staff may further contribute to increasing levels of stress (AbuAlRub and Al-Zaru, 2008; Shamia, et al., 2015). It is obvious that the causes of stress in the nursing profession can be complex and multifaceted.

Apart from the stressors that occur in the clinical areas, additional responsibility placed on nurses can also increase their stress levels (Al-Hosis, et al., 2013, Al-Nusair, 2017). For example, those authors identify cases when in a sample of US and Canadian nurses, a majority reported that the numbers of patients assigned to them increased. In addition, the report from nurses in North America indicated that senior nurses' roles have been cut and that the Chief Nursing Officer level has been eliminated from several hospitals (Al-Nusair, 2017). These results imply that, in addition to having responsibility for a greater number of patients, staff nurses might also have to take on more tasks for managing services and personnel at the unit level. This takes time away from direct patient care and increases the workload and responsibilities of nurses, leading to increased stress levels and potentially compromising patient safety (Purcell, et al., 2011; Wheeler 2010; Mauno, et al., 2016). Nurses in the KSA are heavily involved in many managerial and non-professional tasks and their accreditation requirements take them away from their clinical duties and require them to attend a small number of education sessions and training. Some researchers reported that bigger workloads were not only linked to higher patient acuity, but also to systemic job issues: nurses were expected to carry out non-nursing duties such as transporting and collecting food trays, housekeeping responsibilities such as room cleaning, the moving of patients and beds and ordering, organising and performing supplementary services that should not have been their remit (Hamaideh, et al., 2008). Despite these requirements they are still expected to manage the same number of patients, as well as their existing clinical responsibilities (Al-Hosis, et al., 2013). Additionally, Zakari, et al. (2010) highlighted that work-related and personal stress can be affected by shift patterns and requirements for nurses to work long hours, to rotate their shifts (day and night), and to work on regular bank holidays, often when most other people are relaxing with their families and friends. The nature of the nursing profession necessitates longer periods of time at work, doing rotating shifts, and being at work during unsocial hours, which can give causes extra tensions in the interface between employment and work-family outcomes (Chaney and Castro 1989; ILO, 2015).

Other research has been conducted to identify which departments and specialities are most prone to causing stress among nurses. Certain specializations including mental health and intensive care may suffer from a staff shortage, whilst coping with physically difficult or demanding patients or patients who are aggressive or confused is often the most stressful side of the job for nurses who work in these units (Jenkins and Eliot, 2004). Such issues identify that some causes of stress for critical care nurses and regular ward nurses are different. This seems to be due to the nature and environment of intensive care areas and associated workload demands, and that is the significance of this study in the KSA where the culture, the environment and work that demands extra paperwork

for ICU nurses are unique factors (Al-Nusair, 2017). ICU nurses who perceived their work to be strenuous and stressful considered that contributory factors such as time pressure, high workloads, a lack of social support from colleagues, a lack of support from supervisors and staff shortages all increased the demanding aspects of their work (AbuAlRub and Al-Zaru, 2008, Riahi, 2011)

Adali and Priami (2002) found that nurses in emergency departments experienced greater levels of stress and related burnout compared to nurses in internal medicine and intensive care, and that was supported by Ahmadi, et al. (2014) who reported that the mean values for job burnout among nurses working in emergency wards and ICUs was extremely higher than those of nurses working in orthopaedic and dialysis wards. In contrast, a year later, Gillespie and Melby (2003) argued that by determining the stressors, effects on patient care and the effect of pressure outside the clinical setting, they could show that nurses in acute medical inpatient environments experienced higher levels of stress than those working in accident and emergency. Subsequently, Mohideen (2009) explored work-related stress amongst accident and emergency nurses and found that of 100 nurses, 46 reported a high stress level score while 54 were found to have lower scores. Another descriptive study sampling 31 nurses showed that 3.2% experienced mild stress, 90.32% experienced moderate stress and 6.46% experienced severe stress (Das, 2006); a moderate stress level is still perceived to be negative. Other studies concluded that student nurses, ward nurses, renal care nurses and psychiatric nurses all reported feelings of stress at work (Tyson and Pongruengphant, 2004; Piko, 2006; Sveinsdóttir, et al., 2006). This variation in results could be credited to several factors other than the nature of the specialism. For instance, it could be because the inclusion/exclusion criteria used in the studies were different, the locality might have an impact, or it could be related to the methods and tools used, since a broad range and degrees of validation were used. In a more recent study conducted by Al-Makhaita, et al. (2014), the results showed a high prevalence of job stress among the nurses in both primary and secondary health care levels. Young age, being married and having more than three children were associated causes for job stress among nurses in primary healthcare. Young age, female gender, Saudi citizenship, married status, working rotating shifts and working on surgical wards were the significant predictors of job stress among nurses in secondary healthcare. With so many potential local job and work-related variables it is therefore impossible to provide a 'league table' of stressful nurse specialisms. Further, due to the lack of research on work-related stress levels amongst intensive care nurses in the KSA, this information cannot be compared directly to other context within the KSA. The comparable picture from the KSA remains unclear.

With increased levels of stress, and its impact on nursing and the organization, researchers have studied the effect and impact of stress on staff turnover. The turnover of nursing staff represents a major cost to hospitals (O'Brien-Pallas, et al., 2006; Jones, 2008; Li and Jones, 2012) and can have a profound influence on the financial performance of healthcare systems (Hayes, et al., 2006; Baumann 2010). In the USA, the turnover of newly licensed registered nurses costs the federal government an estimated \$856 million, and between \$1.4 and \$2.1 billion per year to the community (Brewer, et al., 2011). Reports have highlighted a history of the impact of nursing shortages in hospitals due to increasing staff turnover as nurses leave the profession because of stress, for example from 3.2% in 2006/2007 to 4.7% in 2008/2009 (Moy, 2009). Similarly, study results have long demonstrated the negative impacts of work related stress on staff turnover and intention to stay in a post as well as the level of job satisfaction amongst staff (AbuAlRub and Al-Zaru, 2008; Bozionelos, 2009; McGibbon, 2010). Several studies also have highlighted a significant link between nurses' work-related stress and their job satisfaction (Nakakis and Ouzouni, 2008; Wolf, 2003).

In a German study conducted by Sehlen, et al. (2009) researchers aimed to examine the relationship between nursing burnout and job stress due to staff shortages. The study included 123 nurses from eight teaching hospitals and three general hospitals and used the German Stress Questionnaire of Nurses and Physicians, together with questions about job satisfaction. The results showed that the highest level of stress and burnout was among nurses and physicians. The researchers concluded that the workplace environment was the main cause of high stress levels and low job satisfaction and recommended that healthcare institutions identify and remove critical points of stress to lower the level of stress and increase the level of job satisfaction. Hsu, et al. (2010) confirmed the relationship between work stress as the independent variable and burnout as the dependent variable. In this study the authors used a cross-sectional questionnaire with 121 male nurses, using stepwise multiple regressions to analyse the data. Another Korean study by Yoon and Kim (2010) conducted in four general hospitals in Seoul included 283 nurses and reported that job stress was associated with burnout and the higher stress level for nurses led to higher turnover rates. These findings were reinforced by Xie, et al. (2011) and Dasgupta (2012) who found that nurses experienced elevated levels of burnout which was strongly connected with work-related stress because of extra workload and dissatisfaction with salary.

The staff turnover rate in private hospitals in the USA has been estimated at 14% amongst bedside nurses and roughly 28% amongst nurses who were within their first year of employment (Nursing Solutions, 2017), which is considered very high when the Saudi Ministry of Health's aim is 8-10% (Al-Nusair, 2017). Staff turnover rates have been

reported as nearly 10% in England (Morris, 2006), 12-21% in 10 European countries, and almost 20% in Canada (Clancy, 2008). However, in 2016 the nursing turnover rate in England was 14.6%, down from 17.2% in 2015 (NSI Nursing Solutions, 2017). It is clear that staff shortages and turnover have long been recognized and are global problems posing a direct threat to healthcare provision, but it has yet to be addressed and reflects changing work and recruitment strategies over the period (Al-Nusair, 2017). Other studies have shown that a high turnover among nursing staff can negatively affect patient care (Castle and Engberg, 2005; O'Brien-Pallas, et al., 2010). Wright, et al. (2006) noted that staff shortages caused increased workloads which reflected negatively on the excellence of care delivered to patients and on the nurses' satisfaction levels. There is no doubt that staff turnover can lead to a shortage of nurses and a lack of expertise which, in turn, can lead to inferior quality care (Al-Nusair, 2017).

Several studies have established a relationship between the shortage of nurses and nurse workload, nurse-reported quality of care, patient safety and other outcomes. A growing body of literature has highlighted that adequate numbers of nursing staff and adequate nurse-to-patient ratios are essential for the delivery of a better quality of nursing care (Aiken, et al., 2002; Aiken, et al., 2012; Laschinger, et al., 2001; Nantsupawat, et al., 2011; Patrician, et al., 2010; Sochalski, 2001) and nurse-reported patient safety (Aiken, et al., 2012). Moreover, positive nurse-to-patient ratios have been connected to lower rates of adverse patient outcomes and fewer medication errors (Aiken, et al., 2008; Friese, et al., 2008; Kane, et al., 2007; Laschinger and Leiter, 2006; Kazanjian, et al., 2005; Clarke and Aiken, 2003). In addition, greater levels of patient satisfaction are also reported, as the quality of care provided is better (Aiken, et al., 2012).

Aiken, et al. (2002a) argued that the additional responsibility imposed on nurses might also be attributed to the dwindling number of nurses in hospitals. The hypothesis that a minimum level of staffing is needed to retain nurses and minimise staff turnover was examined using cross-sectional analysis of data from 10,184 participants (staff nurses) from multiple centres in Europe over seven months. The results indicated that for every patient added to the workload of a hospital bedside nurse; there was a 23% increase in burnout and a 15% rise in job dissatisfaction; both precursors to voluntary job resignation. As mentioned previously, such studies cannot be generalised to the KSA because of the unique culture and context in the Gulf region and also to the fact that their study was conducted among general nurses and not intensive care nurses.

Another study explored the extent to which, and the causes why, registered nurses at a university hospital planned to resign from their current jobs. A total of 833 nurses

answered to two mailed, work-environment questionnaires (Quality Work Competent and Huddinge University Hospital Model Questionnaires). It was reported that 35% of nurses had taken steps to resign, citing dissatisfaction with their salary (65%), psychologically strenuous and stressful work (32%), a wish to try something new (28%) and limited opportunities to develop professionally (19%) (Gardulf, et al., 2005). Nurses who planned to resign also reported a higher work tempo, an increased work-related exhaustion and a perception of delivery of a lower quality of patient care. These findings were further confirmed in a more recent study using an observational cross-sectional sample of 1,884 nursing staff from 306 acute care hospitals in the USA over a period of two years (Moss, et al., 2016) The results highlighted that controlled hospital ownership, maintaining Magnet status, unit service line, population age group and nurses' skill mix are more vital than total nurse staffing levels in predicting nursing turnover. To a lesser extent, these nurses felt they were not given an opportunity to make use of their professional skills and were given fewer chances to further develop their competence or to advance within their careers. In addition, they were less satisfied with the support given by their superiors for participation in nursing research and development projects.

In summary, it is clear from the literature that there is unmistakable evidence globally that work-related stress has a serious negative effect on the recruitment, retention, productivity and performance of any organisation, including health care facilities. As a result, this has a negative effect on patient care and outcomes. However, one of the main problems that arises when dealing with work-related stress and dissatisfaction amongst nurses is that the causes of stress are complex, multifaceted, and sometimes hard to identify, and often reflect local workplace issues and processes. These factors, in addition to the current lack of studies that focus on the same variables in the KSA with its culturally diverse working environment and substantial number of expatriate nurses, provide a clear justification for the current research.

3.6 Nursing and Job Stress in the KSA and Gulf Region

The nursing profession in Saudi Arabia is still not well established among Saudi nationals, especially males, and is still not a consideration in the development of strategic plans in the Saudi healthcare sector. Aldossary, et al. (2008) and AlMadani (2015) highlighted that Saudi nurses constitute only 29% of the total nursing workforce in the KSA, and most of this percentage is not well utilised and developed (Al-Mahmoud, et al., 2012; Almutairi, 2015); only 4% from the total 29% have bachelor degrees with the rest having a nursing diploma (Abu-Zinadah, 2006). Nurses are essential pillars of any healthcare service and it is important that they are supported in their career choice. Abu-

Zinadah (2006) reported that there have been developments in considering nursing as a career for both males and females in the KSA, however the profession still faces a lot of challenges and criticism. In addition to the issues identified, both at the community level and in the professional practice of nursing, urgent and vital solutions are required. Most notable is the lack of having one responsible authority for nursing in the Kingdom.

In 1992, the KSA introduced a strategic planning approach to introduce and implement a plan to create the 'Saudization' of workplaces in the KSA, mainly in healthcare institutions (Al-Mahmoud, et al., 2012; Al-Asmari, 2008). The target of the plan was to replace expatriates, especially nurses, working in the KSA with Saudi nationals (Al-Asmari, 2008; Almutairi, 2015; Albougami, 2015). Policy makers need to explore and identify the causes underpinning the low nursing recruitment levels of the local Saudi population. Significantly, this data will allow the KSA to make provision for its growing population and create an economic advantage for the country (Al-Asmari, 2008; AlYami and Watson, 2014). The inadequate representation of nursing and the prevalence of poor working settings such as long and rotating working shifts, especially for female Saudis, has been linked with low enrolment in nursing schools in Saudi Arabia (AlRoqi, 2017).

The limited research within the Saudi healthcare sector has identified the following variables that contribute to job stress: working conditions in Saudi hospitals, work relationships, shift patterns and lack of flexibility, role conflict and ambiguity, organizational structure and culture, limited profession development opportunities and the demanding fact of the nursing profession (El-Jardali, et al., 2009; Flinkman, et al., 2008; Zakari, et al., 2010). Al-Turki, et al. (2010) conducted a large quantitative study aimed at identifying and exploring burnout factors among 510 nurses in Al Khobar, Saudi Arabia. Their results showed high or considerable emotional exhaustion, with the same number reporting a sense of depersonalization. This study reported that expatriate nurses faced higher levels of emotional exhaustion than Saudi nurses, and younger nurses reported greater rates of burnout than older nurses. The study confirmed that Saudi hospitals are very stressful environments for nurses to work in because of the workload and relationships with physicians. Another study by Al Zahrani (2011) reported that management practices and a perception of organizational injustice affected the level of burnout in nurses who worked in private hospitals, whilst a study to explore stress, by Al-Hosis, et al. (2013), using a descriptive exploration design with 152 Saudi nurses in a Ministry of Health hospital reported that stress among Saudi nurses was attributed to workload, work responsibilities, patient and family issues, and time constraints. These led to a range of health issues. The findings also reported, using descriptive-correlation cross-sectional analysis, that there was a lack of support from managers and senior

colleagues in exploring and identifying the main stressors among nurses in the Taif public hospital. The study used the stress and satisfaction scale to show that the most common job stressors for nurses in the Taif hospital were; working with patients and their families, lack of preparation to deal with patients' emotional needs, and workload. In addition, conflict with managers, conflict with physicians and disagreements over patients' care plans, looking after sick or dying patients and discrimination were also cited. However, these two studies cannot be generalised as they were conducted in two different hospitals on one site each and recruited only a small number of participants. As stated earlier, research on job stress in the KSA is minimal and only recently have researchers started to concentrate on this phenomenon.

Generally job stress assumes a low priority in KSA. Resources available to expatriates are limited, and data and research are inadequate (Al Nusair, 2017). It is therefore important to explore psychosocial risks and work-related stress (WRS) in KSA to identify and investigate the gap in the surveillance system. Improving the professional capacity of expatriate nurses is important for improving working conditions in a unique culture and system like KSA where the healthcare system extremely relies on expatriate ICU nurses immigrating from all over the world. As there has been little research conducted in KSA it is hard to establish a picture of job stress among intensive care nurses there. The existing studies' findings can therefore only be generalised to hospital nurses in general and not specifically to intensive care nurses working in the diverse culture setting of KSA or even in Gulf region.

The systematic method of literature review highlights the problems found in some studies but alongside the wider literature helps to deliver the justification for an additional investigation of WRS among ICU nurses as well as informing the choice of variables considered vital in relation to job stress. Finally, a great deal of research has been carried out recounting job stress and the adjustment of nurses globally, but none has been written specifically about job stress and its relation to satisfaction among ICU nurses in KSA. Looking at the current situation of ICU nurses, there is a necessity to conduct this study.

As a result, the outcome of the present research means that the Saudi authority and particularly the health sector will gain advantage. In addition to this, expatriate nurses experience many difficulties when they come to work in Saudi Arabia and this study may be informative in that respect. Finally, the distinctiveness of this research to the decision makers in the Ministry of Health is that it uses a rigorous process to identify and explain the social, economic and individual factors that influence nurses' stress and satisfaction in the hospitals in KSA. The purpose is to gain awareness and understanding from the

findings to draw conclusions on the reasons that may impede nurse stress and its impact on retention to make recommendations to the Minister of Health in this respect.

The next section continues by discussing stress specifically pertaining to nurses in the ICU speciality and how it can lead to burnout, one of the main consequences of experiencing very high levels of stress due to workload, the serious level of illness of the patients and the consequent requirement for nurses to liaise closely with relatives.

3.7 Stress and Burnout in the ICU

A link between stress and environmental factors has been demonstrated in ICU because the setting is very confined and is dominated by highly technical equipment and monitors. In such complex and demanding environments, post-traumatic stress disorder (PTSD) was found to be relatively common among ICU nurses with about 25% testing positive for PTSD compared with 14% of general ward nurses (Mealer, et al., 2007). PTSD is an anxiety disorder usually associated with very stressful, frightening or distressing events such as serious road accidents, violent personal assault, prolonged sexual abuse, witnessing violent death, military combat, being held hostage, terrorist attacks and natural crises (Mealer, et al., 2007). It is well documented that the occurrence of stress is especially common in ICU nurses because they are likely to have to cope with a wide range of extra critical skills and tasks, from providing high standards of safe and essential care to the facility to use sophisticated technical equipment, through to bereavement counselling (Ropis, 2005). In addition, there are environmental factors in ICUs such as monitors, alarms and advanced life support equipment which make for a stressful experience (Mealer, et al., 2007). Patients with greater levels of serious sickness (Level 3 ICU patients) normally require more expert nursing staff to manage with the extra workload and physical demands in these clinical areas. Adequate supply of nurses is therefore needed to meet the expanded workload levels for these nurses (Kim, et al., 2016).

Job stress in the nursing career can lead to burnout which has been defined as a specific sort of work-related stress experienced by human-service professionals (Al Zahrani, 2011; Al-Nusair, 2017). Amongst healthcare personnel, burnout has been hypothesized as the outcome of continued emotional and interpersonal stressors in the clinical area (Regan, et al., 2009). Burnout is a reaction to chronic workplace stress and leads to emotional and mental exhaustion and depersonalization, as well as negatively affecting personal accomplishment (Al Hosis, et al., 2013; Braithwait, 2008). It is well documented

that stress can lead to increased nursing turnover and burnout and in some circumstances can lead to psychological and mental health issues.

Despite several studies conducted in the areas of work-related stress and work satisfaction amongst nurses, historically only limited studies were specifically paid attention to intensive care nursing (Gillespie and Melby, 2003). Intensive care nurses face many challenges that can lead to work related stress and burnout, such as heavy workloads and wide-ranging responsibilities, combined with minimum levels of authority (Bakker, et al., 2005b). This creates a work environment where the external stressors can sometimes exceed the nurses' capacity to cope and deal with those stressors.

It has been suggested that intensive care nurses face stressful situations more often than nurses in other settings (Adomat and Killingworth, 1994; Donchin and Seagull, 2002; Hurst and Koplin-Baucum, 2005). However, as discussed earlier, there are conflicting reports and seeking to establish a 'league table' of specialisms in this respect is not possible, or even helpful. It is clear however that intensive care is highly stressful, exacerbated by emotional costs of working with families and extremely ill patients. ICU nurses face a wide range of emotional challenges such as, for example, listening and talking to patients and families about approaching death, and organ donation (Halvorsen, 2006). Working in ICU often exposes nurses to the traumas of dealing with both patients and their families when discussing severe illness, injury and death. Halvorsen (2006) reported that dealing with a dying patient and their family can induce anxiety, depression, fear and anger amongst nurses. In the UK, ICU patient mortality rates (which average 20%), have been linked to nurses' experience of high stress levels. As the mortality rate increases so does stress among ICU nurses, because nurses link the death and the outcome of patients with their personal performance and also because some nurses get emotionally close to patients and relatives (Regan, et al., 2009).

The Critical Care Nursing Stress Scale (CCNSS) was developed and applied by Sawatzky (1996) to identify the highest stressors for ICU nurses. The scale consists of 40 stressors and was used to survey 1,800 ICU nurses. The results demonstrated that the highest stress levels were indeed related to patient care, as well as to management issues. As previously noted, nurses who work with critically ill patients experience high levels of anxiety and stress (Adomate and Killingworth, 1994; Donchin and Seagull, 2002; Hurst and Koplin-Baucum, 2005) and are especially susceptible to high staff turnover and staff shortages (O'Brien-Pallas, et al., 2001; Patrick and Lavery, 2007; Sochalski, 2001). Several research papers have highlighted the widespread presence of at least moderate stages of emotional exhaustion amongst critical care nurses (Patrick and Lavery, 2007; Stordeur, et al., 2001) which is the first step towards, and the core

symptom of, burnout (Shiroma, et al., 2008). The demanding environment found on ICUs is frequently associated with anxiety and depression among critical care nurses (Mealer, et al., 2007). Feelings of anxiety, depression, low confidence, exhaustion and low self-esteem are all associated with stress and these symptoms have been shown to inhibit nurses' ability to supply high quality care (Braithwaite, 2008). Some ICU nurses become severely stressed, resulting in high sickness rates and absenteeism, low morale, mental fatigue and poor staff retention (Braithwaite, 2008). The importance of the present research to nursing is that addressing issues that underpin the sources of stress in the ICU could be directed towards improving nurse well-being, nursing performance, lower attrition and lead to a more reliable level of ideal patient care.

Burnout complaints among nurses in ICU made a significant and unique input to explaining the relationship between burnout and its causes including, emotional exhaustion, de-personalisation and absence of personal recognition and accomplishment. Burnout is contagious and crosses over amongst nurses because of the same poor work environment factors (staff shortages, workload) (Bakker, et al., 2005a). One study advised that the most common and regularly cited workplace stressor and reason for burnout amongst ICU nurses in China was related to workload (Li and Lambert, 2008). Although this might be a cultural phenomenon in the country, the discussion so far clearly identifies workload as a significant direct or indirect source of nursing stress generally. The most-used coping strategy to deal with workload stressors was planning and organising tasks and shifts in advance.

To some degree, the above-stated discussion has been reflected in the search for latent settings and local contributing aspects in exploring the stressors, mostly because of subjectivity in addressing the essential problems. There is considerable evidence to demonstrate that whilst workload is the highest stressor among ICU nurses (Al- Nisair, 2017), some research has found that ICU nurses did not always perceive their workplace to be stressful. Certain nature traits may have a buffering effect on workplace stress. For example, Burgess, et al. (2010) suggested that more experienced nurses reported less stress and this was attributable to their having developed greater skills in coping with workplace and external stressors due to their ability to use problem solving skills before any conflict arises and because they are more confident in using stress coping and dealing with stressors at work. Nurses' coping strategies were investigated by Regan, et al. (2009) with 87 intensive care nurses in the UK participating in a cross-sectional research using the Nursing Stress Scale (NSS) questionnaire. The findings showed that workload was considered as the biggest cause of stress, and death and dying was considered as the second most significant stressor, but senior nurses were able to deal

with these stressors better than junior nurses throughout by using coping strategies as a mechanism.

Despite the sophisticated studies that have been undertaken so far, the collective results (particularly from numerous experimental studies) seem paradoxical. In earlier reports (Duquette, et al., 1994; Schaufeli and Enzmann, 1998) burnout amongst nurses was not attached to any of the previously identified stressors that have become more significant today. Lower levels of reported stress associated with emotional demands predicted a coping mechanism and studies have concluded that emotional demands do not necessarily lead to burnout in nurses and are not always related to stressors such as workload or conflict (Maslach, et al., 2001; Regan, et al., 2009). This discrepancy in the findings might be attributable to the nature of different ICUs, since nurses who work in cardiac ICU where outcomes and recovery are generally good, do not experience the same stressors as those who work in medical ICUs where treatment is more long-term and patient outcomes are often poor. The discrepancies might also be a result of different levels of experience or seniority of the participants, or perhaps to deteriorating wider work environments in recent years.

A study conducted by Leiter and Maslach (2009) recruited 667 Canadian ICU nurses, with the aim of investigating whether the mediation model of burnout could predict nurses' turnover intentions. The mediation model was developed when nurses' internal experience of stress was presumed to play a mediating part between the power of external job demands (stressors) and work-related outcomes (such as sickness). The results supported the mediation model of burnout in which certain areas of work life predicted burnout which, in turn, predicted turnover intentions. However, one study (Young, et al., 2011) evaluated professional quality of life by investigating the prevalence of compassion satisfaction (CS) and compassion fatigue, that is, secondary traumatic stress (STS) and burnout, between nurses who worked in ICU and nurses who worked in an intermediate care setting in a heart and vascular hospital. The results showed that both groups had an average to high score of CS, low to average levels of burnout, and low to average levels of STS. From the previous discussions, such similarity of findings seem to counter notions of predictability and this highlights the need for broad and flexible strategies to prevent the onset of developing burnout tailored to staff personal characteristics and the specific work environment and leadership.

In summary, intensive care environments are considered, in several ways, to be complex, high-risk environments owing to the severity and unpredictability of patients' illnesses, the recurrent need for high-risk interventions, the need for frequent medication changes and the close relationships that nurses develop with patients' families. Various

debates have been raised by different researchers regarding the definition of stress and the relationship between stress and burnout. Criticism of the existing situation in ICUs recognises the difficulty in investigating the relationship between stress and burnout, but also notes that the underlying causes of stress are not taken into consideration. Having discussed difficulties in defining stress, and discussing the importance of job stress on the healthcare system particularly in intensive care settings, the effect and relationship of stress on burnout and turnover were then discussed considering the identified problems. Several studies have highlighted an increase in staff turnover and burnout rates amongst nurses who work in intensive care settings, but there are no clear or published statistics regarding this critical issue (turnover) in the KSA. When hospitals in the KSA have implemented strategies such as conditional double salary if nurses stayed in the hospital for one additional year after renewing their contract, there has been a reduction in nurses' turnover and burnout. Hospitals in the KSA is facing major challenges in recruiting qualified nurses from abroad and retaining those nurses for an acceptable length of time. Health organisations that rely on labour markets where nursing supplies are short, and the turnover is high, face serious operational problems. Therefore, the retention of staff is critical for any hospital, as employees who leave are difficult and expensive to replace. The importance of the negative effect of staff burnout on healthcare has been highlighted and it is strongly recommended that healthcare institutions and leaders should focus on burnout and make employees aware of it, because a better understanding of the concept, its causes and how to cope or moderate those might decrease stress scores for nurses in clinical areas in the future.

3.8 Sources of Stress

The need to address the causes of stress in healthcare has been recognised by the UK Government in their attempts to rectify the deficit in nursing recruitment and retention and to establish a participative style of management (Department of Health, 2002). In order to protect employees from severe stress and distress it is very important for hospital managers to understand the sources of stress and the factors that promote its transition. In the workplace, stress transition is detrimental for nurses as it is linked to absenteeism and poor staff retention (Healy and McKay, 1999; Shader, et al., 2001). It is yet to be demonstrated whether government will have any valued input in practice. The previous sections identified the multifaceted sources of workplace stress and how, whilst these are variable between settings, the issues such as staff shortages, workload, emotional demands of ICU care, and effectiveness of leadership and stress management strategy are mostly common features. This section considers other factors alongside these that

derive from or are independent of those, including social-centred factors, that also have been shown to mediate or moderate nurse stress and risk of burnout.

Eight sub-scales of workplace stressors can be identified, from the literature above and from French et al. (2001):

- 1- Conflict with physicians which is related to power given to physicians and lack of effective communication skills between physicians and nurses. It is well documented in the KSA that there is huge divide between medical and nursing staff which may lead to unhealthy relationships between them (Al-Nusair, 2017).
- 2- Inadequate orientation and lack of information due to the absence of support and help from managers to juniors during the orientation period after recruitment.
- 3- Problems with peers or with supervisors because of poor communication and misunderstanding between nurses and managers.
- 4- Discrimination between different nations in salary and treatment. The strategy for recruitment and the differences between Asian and Western nurses in terms of salary and other benefit packages is explained in detail in Chapter 2.
- 5- Workload and increased intensity of work, including the nurse: patient ratio and extra nursing and non-nursing tasks.
- 6- Uncertainty concerning treatment and lack of knowledge in prolonging life for some patients.
- 7- Dealing with sick and dying patients. Nurses, especially ICU nurses, are exposed to serious illness, terminally ill patients and grieving families.
- 8- Relationships with patients and/or their families.

One further stressor not mentioned in the list above is that of culture. Sometimes nurses, such as those from the Philippines, Africa and the Middle East must travel overseas to find work, and commonly come to the KSA. This can result in an extremely stressful lifestyle due to the different culture and environment in which they find themselves. In turn, this can lead to increased stress levels and decreased job satisfaction, both of which are associated with an increase in the rate of staff turnover and severe staff shortages which, in themselves, are multifaceted and complex phenomena (Al Nusair, 2017). However, as has been recognised at various points in this thesis, stress phenomena are still under-researched in KSA and most of the stress studies conducted in developed countries which is completely different from KSA because of the unique

culture and life in KSA. However, the literature search (section 3.2.2) identified a small number of relevant studies, including from Arabic countries other than KSA, as follows.

According to Al-Aameri (2003), there is convincing evidence which identifies six causes of work-related stress in the KSA's government hospitals:

- 1- Organisational structure and climate.
- 2- The nursing job itself, which involves unnecessary tasks and documentation.
- 3- Managerial roles.
- 4- Interpersonal relationships with physicians.
- 5- Career and achievement.
- 6- Home/work interface.

However, Zaghloul (2008) claimed that the most shared sources of work-related stress amongst nurses in the King Faisal Specialist and Research Center Hospital in the KSA were the lack of privacy, followed by staff shortages, then workload, dealing with difficult patients, and lastly, fluctuation in workload. In a similar study, Alotaibi (2008), who attempted to identify the sources of stress amongst 60 nurses in Kuwait, found that low wages, followed by absence of recognition and appreciation from managers were key factors. The most mutual sources of stress for Lebanese nurses were shift work, high patient/nurse ratios, absence of authority in decision making, and absence of support and appreciation from supervisors (El-Jardali, et al., 2008). The most frequent sources of stress for Syrian nurses were salary and job security (Mariam, 2008), while those for ICU nurses working in a children's hospital in Egypt, were death and dying, uncertainty about treatment, conflict with other nurses, and workload (Mohamed, et al., 2011). As discussed above, these findings from other Arabic countries provide interesting insights but cannot be generalised to the KSA because the Saudi context is unique, with 95% of nursing staff being expatriates (Harry, 2007; Bozinelos, 2009). The fact that most nurses are expatriates working in a unique culture like the KSA will allow this research to add new findings to the present literature.

A study in KSA was conducted by Kamal, et al. (2012) who investigated the source of work-related stress and its association with job satisfaction. The study was based on data collected from 148 members of nursing staff from different clinical areas and the results indicated that the most common cause of stress was caring for patients and their relatives. Workload was the second most common source. Similarly, nurses employed in the KSA must deal with staff shortages in many hospitals due to high staff turnover

rates, nurses emigrating to Europe, Canada and the USA, and cost saving initiatives (Al-Hosis, et al., 2013). Hayes, et al. (2006) clearly highlighted that work-related stress increases the likelihood of staff turnover. Despite this, there is a lack of debate around the links between increases in the levels of stress and the high turnover of nursing staff that results in a lower quality of care and organisational inefficiency (French, et al., 2000; Coomber and Barriball, 2007). Interestingly, none mentioned culture as a possible factor.

Unfortunately and because of the small number of studies conducted in KSA, there is no data or published research about turnover rates in the KSA. Because of this, other hospitals were contacted by the author during conferences and benchmarking in the KSA asking for information regarding their staff turnover rates and the job satisfaction levels amongst their nurses, but they declined to provide any information. In fact, it is possible that there are no research infrastructures or initiatives to gather information about work-related stress in the KSA as such data is regarded as highly confidential and Saudi's Ministry of Health policy and procedure is to keep this information secret and secure (Al-Nusair, 2017).

Following sections consider reported stressors in more detail, largely though not in relation to KSA hospitals.

3.8.1 Work Overload

This section seeks to address some of the factors that contribute to workload stress, paying particular attention to definitions, prevalence and causes. Workload stress has been described as an unwillingness to attend work because of feeling steady pressure accompanied by general physiological, psychological and behavioural stress symptoms (Nilufar, et al., 2009). Workload stress was reported to be the highest ranked cause of work-related stress amongst 150 female registered nurses in America (Welsh, 2009; Mauno, et al., 2016; Lin, et al., 2016). Nurses worldwide report that work overload, as well as spending time performing functions that are not formally part of their nursing role, is detrimental to care activities that require their specialist skills and expertise. It is well documented that increased workload and nursing tasks have a significant negative impact on job stress for nurses that reflects negatively on quality of care and patient outcomes. (Hayward, et al., 2016).

Workload can be categorised quantitatively or qualitatively (Haybatollahi, 2009). Quantitative workload relates to the sheer volume of work needed and the timeframe in which it must be completed, while qualitative workload refers to individuals' reactions to their job, and so will differ between individuals. Quantitative work overload is a stressor that seems to relate to elevated levels of strain and job performance. Qualitative work

overload refers to workers' low level of self-esteem, such as the belief that they do not have the necessary skills or capacities to perform the required work (Cooper, et al., 2001). Qualitative work 'underload' also negatively affects employees who are "*not given the chance to use needed skills or to develop full potential ability.*" (Haybatollahi, 2009, p.17).

The global shortage of nurses has led to increased workloads thereby threatening the quality of nursing and the quality of care delivered to patients (Hayward, et al., 2016; Goh, et al., 2016). This results in a vicious circle whereby nursing shortages result in increased workloads for existing nurses which subsequently increases staff turnover and the number of nurses leaving the profession (Hayes, et al., 2006; AbuAlRub, 2007; Al Zahrani, 2011). Workload is further increased by the extra tasks and extra documentation required from nurses; for example, the proportion of nurses who reported cleaning rooms or collecting food trays after patients have finished their meals ranged from roughly one-third to more than two-thirds. At the same time, many nursing tasks that are markers of good nursing care, such as oral hygiene and skin care, bedside teaching, proper documentation and comforting patients, were frequently reported as having not been performed and completed (Al Kandari and Thomas, 2008). Nurses report that less important tasks take time away from other essential tasks such as oral care or turning the patient.

There is a sentiment that because of the increased number of tasks to be performed, nurses are not happy with the current culture, as they are unable to finish both their nursing and non-nursing tasks (McVicar 2003; Goh and Lopez. 2016). They are required to provide a high-quality service over extended hours with a large workload and within a short timeframe (Aiken, et al., 2001). Hospital understaffing and a growing shortage of hospital nurses (El-Jardali, et al., 2009) comprise a key inhibitor of safe and effective care provision (Aiken, et al., 2001) and are directly linked to nurses' stress by virtue of work overload (Joint Commission on Accreditation of Healthcare Organizations, 2002; Francis, 2013). Low salary, high workload and absence of social support all contribute to work related stress causing nurses to leave their jobs and the profession before they reach the age of retirement (Al Nusair, 2017).

The international nursing shortage was been projected to increase from 6% in 2003 to 29% by 2020 (Health Care Strategic Management, 2003). Recent reports in the UK identify 35,000+ vacancies advertised for nurses in 2019 (Buchan et al. 2019). This shortage of staff undoubtedly contributes to lead to dissatisfaction amongst existing nursing staff because the absence of sufficient capacity to be able to fulfil their roles means deficit in providing the high quality patient care to which they aspire (Aiken, et al.,

2002). Nurses struggle to cope with current staff shortages and increased workloads as well as with the expectation that they will undertake unpaid overtime in order to fulfil their duties (Aiken, et al., 2001). According to the World Health Organisation (WHO, 2006) the continuously increasing work-related demands on nurses and the shortage of nursing staff can lead to a variety of pathological results including, mental and physical disorders, increased sick leave, and reduced performance and productivity among nurses. It is becoming increasingly problematic to neglect the influence of work overload on nursing staff and therefore there is a need to study the source, reasons and consequences of this.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO; 2002) highlighted that unrealistic and unsafe nurse-patient ratios, with extra workloads and excessive administrative paperwork, prevented nurses from providing high-quality care, resulting in work related stress and dissatisfaction amongst nurses. Several studies have reported that increased workload and high patient-nurse ratios are the main reasons for higher levels of job dissatisfaction, stress and emotional exhaustion amongst nurses and summarized that in hospitals with the highest patient workload (i.e. high patient-nurse ratios), surgical patients had a higher mortality rate and nurses had higher levels of job-related stress than those healthcare professionals with a lesser workload (see Aiken, et al., 2002b). A cross-sectional study conducted by Aiken, et al. (2002b) recruited 168 hospitals with a total number of nurses of $n=342$ and measured core patient outcomes (mortality and death) among surgical patients with relation to nursing attendance and punctuality, workload, average years of service and level of accreditation. They reported that every 10% increment in the number of participants with higher educational qualifications diminished the danger of mortality and of failure to recover by 5%. Nurses have higher slip rates when exhausted (Rogers, et al., 2004); they are more stressed with longer working hours (Hoffman and Scott 2003; Purcell, et al., 2011) and they make more errors (e.g. medication errors) when workloads are excessive (Aiken, et al., 2002b). High workloads decrease the time available for nurses to provide emotional support and cope with stress and exhaustion, conflict with doctors and poor communication with direct supervisors (Kane, 2009; McCarthy, et al., 2010) which in turn causes more stress. Stress from work overload is exacerbated by a shortage of nurses and a resultant lack of continuity in assignments, with insufficient resources (Al-Nusair, 2017). This level of stress is perceived negatively by registered nurses and is related to their organisational stress. Heavy workloads, combined with a lack of time spent with patients, was associated with nurses feeling undervalued by managers and patients and was considered a further contributing factor to elevated levels of stress and turnover amongst nursing staff (Davison, 2002; Mauno, et al., 2016).

Hamaideh, et al. (2008) devised a study to examine job stressors among Jordanian nurses. The Nursing Stress Scale was used to gather information from a convenience sample of 464 participants (nurses) who were working in 13 Jordanian hospitals; results reported that workload was identified as a key stressor. Another study conducted by AbuAlRub (2006) surveyed 263 American nurses with a web-based method using the same tool (NSS) used by Hamaideh et al. The Jordanian nurses claimed that the most significant stressors were “workload” and “patients and families”, while the most significant stressors for the American nurses were “conflict with other nurses” and “workload”. This was confirmed in a further study among intensive care nurses conducted by Li and Lambert (2008); the study concluded that workload remained the biggest cause of stress for nurses.

In acknowledging this issue, many studies have been conducted to explore the influence of adverse workloads on nurses. One of the main reasons why nurses leave their current post and change their job was related to the extra workload and tasks (Chang, et al., 2005; El-Jardali, et al., 2009). Mahran and Al-Nagshbandi (2012) added that the combination of workloads and the shortage of nurses led to less time for the social, emotional and psychological caring aspects of nursing, which are often the primary motivators for people entering the nursing profession in the first place. This paradox increases nurses’ stress and produces a failure to maintain high nursing standards, whilst the consequent dissatisfaction prevents the provision of optimum care.

Research has also explored the effect of workload on work-related stress and burnout amongst nurses. Eighty percent of nurses reported that they must work physically hard in their job, almost 70% reported that they felt under great stress almost every day and a further 20% reported feeling under great stress several days a week (Duncan-Poitier, 2003). This was supported by Alasmari and Douglas (2012). When they compared a study they had conducted in 1991 with a new Canadian study by Duxbury and Higgins (2001) who demonstrated a rise in stress related to workload, they found that twice as many employees in the 2001 sample of 6,500 participants (27% compared to 13% in the 1991 study) reported having a high degree of work stress, and that employees who suffered from work overload were more likely to use Canada’s healthcare system. However, these findings need to be treated with caution as it is possible that in 1991 and earlier, nurses might not have referred to this as ‘workplace stress’, whereas now there is a greater awareness of the concept. So, it may be that workplace stress existed at a similar level, except that labels and expectations have now changed. In a study conducted with 1,793 people from 69 hospitals in Lebanon, in the Middle East, El-Jardali, et al. (2009) reported that staff shortages increased the risk of extended hospitalization by approximately 80% and the risk of infection by approximately 20%. They also found

that nurse turnover could increase the patient-to-nurse ratio and nurses' workload, resulting in further increases in staff turnover.

In a study by Qiao and Schaufeli (2011), a total sample of 96 new graduate nurses in central China completed four surveys using the NSS. The results reported that death and dying, workload and inadequate orientation were the most mutual causes of stress for nurses. Meanwhile, a descriptive correlational study conducted by Wang, et al. (2012) aimed to examine the association between job stress and coping strategies of Hong Kong nurses working in surgical units. The results showed that workload, lack of support and absence of organisation were the most widely recognised causes of stress amongst nurses.

There is clear evidence from the available literature that excessive workloads negatively impact on work-related stress amongst nurses, including critical care nurses, and that this has a subsequent negative effect on staff turnover and on staff shortages which will then reflect negatively on patient care and outcomes. For these reasons, further investigation is needed to explore this phenomenon in greater depth.

3.8.2 The Role of Nurses in Providing Care to Dying Patients

Looking after critically ill or dying patients is recognised as one of the main stressors for intensive-care nurses. ICU patients are very sick and receive more medication, as well as being surrounded by and connected to machines and monitors that might increase nurses' workload. Several studies have already shown that caring for critically ill and dying patients is a major cause of stress for nurses in general, and particularly for ICU nurses (Cole, Slocumb and Mastey, 2001; Moszczynski and Haney, 2002; Mohamed, et al., 2011). According to Brisley and Wood (2002), caring for a patient who is about to encounter death, or who dies unexpectedly, is often a cause of anxiety and depression for nurses.

Unexpected death on the operating theatre table during routine operations is especially stressful for nurses (Edwards, 1997). When unexpected deaths occur, grief, burnout, and turnover of staff increases amongst nurses working in operating theatres and recovery rooms (Gerber and Workman, 1995). Stress relating to a dying patient is more prevalent among junior nurses than among senior nurses because of their lack of experience and often inadequate education around issues of mortality (Brisley and Wood, 2002). According to Gillespie and Kermode (2004), nurses reported feelings of inadequacy, ineffectiveness and self-blame when dealing with dying patients. Butterworth, et al. (1999) reported that newly graduated nurses and junior nurses find dealing with dying patients and their relatives to be more stressful than do senior nurses;

this is thought to be related to their lack of coping mechanisms. That was supported by Qiao, et al. (2011) who investigated stress among 96 newly graduated nurses; the results showed that death and dying was considered as the biggest cause of stress for junior nurses.

Caring for dying or critically ill children who are in pain can understandably be extremely stressful (Hamaideh, et al., 2008). Nurses' inexperience and inability to meet the needs of patients and their families during end-of-life care can be very stressful and become factors that may ultimately encourage nurses to quite their job (Mohamed, et al., 2011). For senior nurses, some tasks and aspects of nursing previously considered stressful can become less so.

It has been shown that there is a remarkably high occurrence of stress amongst intensive care nurses who work in paediatric units. In a study by Bratt (2000), a sample of 1,973 staff nurses in Paediatric Critical Care Units (PICU) across 65 institutions in the USA and Canada were questioned in a cross-sectional survey which measured nurses' perceptions of work-related stress, nurse-physician collaboration, nursing leadership, professional job satisfaction, and organisational work satisfaction. Twenty-two percent of the participants reported that caring for children who are facing death, and dealing with their families, is a stressor and they described the stress and difficulty attached to witnessing the death of a child to whom they had become attached and providing the subsequent support given to grieving families. This result was supported by Hawkins, et al. (2007) who examined the job stressors in hospice nurses and highlighted the potential effect of their attachment styles on stress and coping experiences. The results showed that the most common sources of stress were "death and dying" and "workload". However, stress that is related to caring for dying patients cannot be generalised to all critical care nurses as there is a discrepancy in the source, level and nature of stress between nurses who work in paediatric ICUs or surgical ICUs and in medical or long-term ICUs. The seniority of the nurses and the coping mechanisms that they have at their disposal also plays a vital role in relation to this stressor.

3.8.3 Shift Rotation and Scheduling

The nature of nursing requires long periods of time at work, working rotating shifts, and being on duty throughout unsocial hours (nights) which results in extra tensions at the interface between employment and work-family outcomes (ILO, 2015). Rotation and long shift work are a key stressor for nurses (Oginska-Bulik, 2006). Inflexibility in employment causes stress at both occupational and personal levels in immigrant nurses (Oginska-Bulik, 2006).and shift scheduling was highlighted as a cause of stress amongst 197 staff

nurses in the USA (Purcell, et al., 2011). Extra and excessive working hours are detrimental to the overall physical and psychological health of nursing staff (Sparks, et al., 1997). Ten percent of nurses working nights and rotating shifts complained about sleep disturbance and insomnia (Dark, et al., 2004; Akerstedt 2005), both of which are commonly closely related to stress (Marquie, et al., 1999; Akerstedt, et al., 2002; Kecklund and Akerstedt, 2004).

Dembe, et al. (2006) reported that the risk of occupational injury and stress increases with the incidence of night shifts and rotating shift work, especially when nurses have underlying health issues. For example, several researches have reported the effect of night shifts and shift work on metabolic syndrome (Nagaya, et al., 2002; Karlsson, et al., 2003) and type II diabetes (Morikawa, et al., 2005). Additionally, there is unambiguous evidence that nurses who work more than 48 hours a week are more prone to work-related stress and health issues such as cardiovascular disease, self-related health problems, and fatigue (Sparks, et al., 1997; Van Der Hulst, 2003; Caruso, et al., 2004). Fatigue and exhaustion are key characteristics of long-term stress (Melamed, et al., 1999), yet it is reported that there has been an increase in the number of nurses working long days or nights (12-hour shifts) because it is a more cost-effective way of providing 24-hour care, with lower cost and better continuity of staffing (Dembe, et al., 2006, Estabrooks, et al., 2009). However, working 12 hours a day is associated with a 23% hazard rate (Dembe, et al., 2006).

Bratt (2000) compared four different shift patterns: 8 hours, 10 hours, 12 hours and rotating shifts. The results showed that nurses who worked mixed shifts had higher levels of work related stress than nurses who consistently worked 10 and 12-hour shifts, and nurses who worked a mixture of shift lengths had less professional job satisfaction. In a quantitative study involving 800 participants, Bratt (2000) reported that nurses who worked rotating shifts faced higher levels of stress than nurses who worked permanent day or night shifts, and nurses who worked alternating shifts reported significantly lower levels of professional satisfaction than nurses who consistently worked night shifts. That was supported by the Royal College of Nursing (2014) who confirmed that shift rotation can have an impact on the work performance of nurses.

Nurses who worked night shifts reported significantly less collaboration with each other than the nurses who worked in rotating shifts. Finally, nurses who worked day shifts reported higher levels of leadership behaviour than nurses who worked night shifts, which can reflect positively on coping with stress (Estabrooks, et al., 2009). AbuAlRub and Al-Zaru (2008) reported that poor mental wellbeing, which incorporates high levels of job stress, relates straightforwardly to undesirable working conditions such as working

shifts and longer hours, the bias of staff nurses' salaries and the relocation of staff from their designated clinical area to an alternative unit to cover nursing shortages; this is an exceptionally regular occurrence among nurses in any healthcare setting, but means that nurses are normally less acquainted with the new unit than their usual unit. Forcing nurses to work in clinical areas where they do not normally work causes an increase in the level of disillusionment and stress, which is thereby connected to a higher turnover of nurses (AbuAlRub 2004; Jamal 2007; AbuAlRub and Al-Zaru, 2008). In a further study by Purcell, et al. (2011) using the NSS, which recruited 197 nurses in the USA, it was reported that scheduling also constituted a source of stress.

Al-Malki, et al. (2012) highlighted the need for better shift work patterns, duty flexibility and childcare facilities as measures to reduce stress and turnover. However, shift patterns and childcare are subject to employment contracts and that is why most of the new private hospitals in the KSA provide childcare services (Al-Malki, et al., 2012). Working a rotating shift of 12 hours and longer can cause fatigue to nurses and results in a significantly poorer quality of care and poorer safety for patients (Stimpfil, et al., 2012, Miller, 2011), whilst also increasing the level of burnout amongst nurses and decreasing patients' satisfaction (Stimpfil, et al., 2012)

3.8.4 Conflict

Conflict is an aspect of a postmodern society that is litigious, competitive and alienating (Zakari, 2010). There is straightforward evidence that nurses face and experience high levels of stress at work because of interpersonal relationships with other healthcare personnel (Wheeler, 2010). According to Kelly (2006), hospital environments are exposed to many kinds of conflict, compounded by rising demands on an ever-limited staffing supply, stretching the available resources and limiting the possibility of taking time to introduce significant modifications and changes. In the tense and stressful hospital environment, conflict amongst multidisciplinary teams and personnel within a discipline are common (Saulo and Wegener, 2000). Yoder-Wise (2007) divided conflict into four categories: (1) intrapersonal, which grows within the individual from two competing demands; (2) interpersonal, which arises between two or more persons because of miscommunication and/or differences in beliefs and values; (3) intergroup/support, which happens when two or more teams that are supportive in work compete for resources, authority or status; and (4) intergroup/other departments, which happens when two or more departments (nursing, medical, quality, dietetics, etc.) compete for resources or services, and where the conflict could be competitive or disruptive or may centre around power.

Conflict within nursing can generate negative feelings; it can lead to energy exhaustion, decreased concentration and increased discomfort (Wilson, 2004). A nurse faces many forms of conflict, but role conflict is the most common (Piko, 2006). Nurses' role conflict can result from work overload, where they are required to do the work of other disciplinary teams such as cleaning rooms, taking blood, extra paperwork; role ambiguity where they expand their responsibilities and duties whilst lacking a job description guide; and role stress, where non-nursing managers have differing concepts about the nurse's job (Zakari, et al., 2010).

It is well documented that interpersonal conflict in healthcare settings leads to workplace distress for students and junior nurses because they lack coping strategies to deal with it (International Council of Nurses, 2006; American Psychiatric Nurses Association, 2008; Center for American Nurses, 2008; Joint Commission for Hospitals, 2008; Trossman, 2010). As these healthcare providers are sensitive and vulnerable, some authors have suggested that interpersonal conflict must be dealt with during the transition into the workplace (Longo, 2007; Hinchberger, 2009; Thomas and Burk, 2009). Nursing is often characterised by role conflict and excessive role demand, and such conditions of work are particularly stressful (Wallace, 2002). We can conclude that increased levels of reported role conflict are always associated with stress, dissatisfaction, poor job performance and increased turnover rate, which in turn, will reflect negatively on patient care (We, 1994; Khalid, et al., 2010).

Healthcare professionals are often unprepared for conflict because it is not expected and shouldn't happen in the workplace, and when it arises it immediately creates stress (WHO, 2004). According to Lee (2004), stress can develop between nurses because of conflict between individuals or between subgroups due to nursing being based on shift work. As nurses are patient advocates and a bridge between patients and other healthcare staff, conflict among or with nurses is particularly dangerous to healthcare provision (Lee, 2004). In the USA, Strachota, et al. (2003) investigated the reasons why registered nurses leave their jobs or change their employment status and whether conflict was a significant factor in this. They used a mixed-method (quantitative and qualitative) approach, generating data from 184 questionnaires and 83 interviews over four months. The results showed overall that participants had positive relationships with colleagues, physicians and other healthcare professionals. Only 9% reported problems and instances of conflict with physicians and colleagues, and 19% reported some problems with other departments. This study argues against the findings from some other studies, as it highlighted that interpersonal conflict may not be a worthy cause of intention to leave. Organisational conflicts are unavoidable, and studies have highlighted that about 20% of employees' time is spent on dealing with conflicts (El

Dahshan and Keshk, 2014). It therefore follows that how conflicts are handled is of interest to researchers and nurse managers (Gupta and Sasidhar 2010; El Dahshan and Keshk, 2014).

Watson and Field (2006) investigated stress and burnout among nurses in a multi-specialty hospital. Results indicated levels of burnout and distress comparable with larger studies. Conflict with doctors, as widely identified in other studies, was the most common source of stress and verbal abuse from physicians was noted to be stressful for staff nurses. In a study aimed at examining the relationships between job satisfaction and managerial rules, role conflict and ambiguity, and between demographic variables related to the retention of nurses within the Chinese healthcare workforce, it was discovered that there is a positive relationship between job satisfaction and organisational commitment and a negative relationship between job satisfaction and role conflict and ambiguity (Wu and Norman, 2006). Another study conducted by Tunc and Kutanis (2009) aiming to examine the relationship between burnout and role conflict and role ambiguity between nurses and physicians at a teaching hospital in Turkey showed that the nurses experienced considerably greater levels of role conflict, role ambiguity and burnout compared to the doctors. Multiple regression analysis indicated that role conflict and role ambiguity might help to explain the reason behind the higher level of burnout experienced by nurses compared to doctors.

In a study conducted in Egypt, Ahmed (2008) aimed to identify the most common type of conflict amongst nurses. The results showed that intergroup conflict was most common, while interpersonal conflict was the least common. This indicates that nurses had no issues in respect of personal relationships as the conflicts that arose between groups was due to competition for resources and power. However, this finding is incongruent with a more recent research study conducted in the KSA by Zakari, et al. (2010), which explored the link between nurses' perceptions of conflict and nursing professionalism. A cross-sectional design was used which employed the Perceived Conflict Scale to measure the level of conflict, and the Valiga Concept of Nursing Scale to measure nurses' professionalism. The study recruited a random sample comprising 346 bedside nurses and managers from three healthcare sectors. The results reported that the most common kind of conflict was interpersonal, and the least common were intrapersonal and intergroup conflicts. There is a dramatic difference between the two studies above with the Egyptian study concluding that the most common conflict in nursing is intergroup whilst the study conducted in the KSA highlighted that the most common conflict is interpersonal: this might be due to the differences in the context and culture, or perhaps due to the difference in the tools or method used in each study.

Both male and female nurses have learned the habit of relinquishing power and authority to doctors and adopting a passive communication style (Rothstein and Hannum, 2007). As a result, an unequal distribution of power has been perpetuated in the doctor-nurse relationship. Additionally, doctors and nurses experience different levels of financial, political and social status, which further contributes to an unequal distribution of power that in turn initiates and increases conflict (Hamlin and Hoffman, 2002). It is well documented that there is a lack of self-respect and decision-making among nurses in the KSA, where nurses feel they are subservient to physicians and are not seen as independent professionals or integrated as key members of the interdisciplinary healthcare team (Lovering, 2008). In a cross-sectional, descriptive research study conducted by Zaghloul, et al. (2008), 499 Saudi nurses were recruited with the aim of identifying factors for turnover and retention. The findings reported that nurses experienced low levels of respect and appreciation from the physicians that was associated with poor communication skills and poor interaction and support from other professions. Arguably, this creates communication barriers between nurses and physicians, as physicians tend not to value or pay attention to the valid input of nurses during their care of patients.

The healthcare system and the organisational structures in the KSA are considered as stressors since all management positions and positions of power are allocated exclusively to doctors whilst excluding nursing staff.

3.8.5 Violence and Aggressive Behaviour

Violence in a healthcare context has been defined as any act of truculence or enmity perpetrated by a colleague on another colleague or by any patient or relative on any staff member (Longo and Sherman, 2007). According to an International Labour Organization report (ILO, 1998), work-related violence, regardless of whether it is physical, verbal or psychological, is a global problem, crossing borders, work settings and occupational groups. Violence against nurses is an international concern and a problem in Australia (Farrell, 1999), New Zealand (Curtis, et al., 2007) and the USA (Vessey, et al., 2009). Nursing can be a high-risk area of employment, where women can be particularly vulnerable (Hamlin and Hoffman, 2002). However, this problem is well known and because of the negative effect on nurses, a great deal of effort has been made, in some countries, to reduce this sort of violence.

Hilton, et al. (1994) and Uzaun (2003) concluded that work-related violence against healthcare professionals has markedly increased, and nursing staff have borne the brunt of this increase. Mayhew and Chappell (2001a) confirmed that nurses face more work-related violence than other healthcare professionals as they are in the front line and

spend longer with patients and relatives. In the USA, Dunn (2003) sampled 145 operation room nurses to identify the presence and effect of communication sabotage on nurses' job satisfaction. The results showed that the most frequent method of sabotage was being expected to do another colleague's work followed by being verbally abused or reprimanded in front of others, and not having their own work acknowledged.

In a similar study by Cook, et al. (2001), verbal abuse was reported as the most usual form of aggression with a reported incidence rate as high as 91% of nurses experiencing some type of verbal abuse from a physician during the previous 6 years (Ergun and Karadakovan, 2005). Verbal abuse is an unhealthy and dysfunctional behaviour, but it is the most common method of articulating anger and frustration on the part of patients and their relatives. Cook, et al. (2001) defined verbal abuse as any kind of verbal behaviour that humiliates, degrades, underestimates or undermines the respect and dignity of another person.

The causes of verbal abuse are varied. Sofield and Salmond (2003) attributed the main causes of verbal abuse in hospitals to extremely stressful incidents and situations, and levels of difference or unfairness in interpersonal relationships between managers and nurses. Verbal abuse can be horizontal or vertical. Horizontal verbal abuse comes from people on the same level within the organisational hierarchy (e.g. nurse-to-nurse verbal abuse) while vertical verbal abuse comes from other professional levels (e.g. physician-to-nurse abuse) (Dunn, 2003). However, the most extreme verbal abuse typically comes from patients or relatives (Paul, 2001). There is a difference between verbal abuse and interpersonal conflict as conflict tends to occur between members of healthcare staff, while verbal abuse is mainly between healthcare staff (e.g. nurses) and relatives or family.

A study exploring verbal abuse among 213 nursing personnel, 95% of whom were registered nurses (RNs) found that the single, most frequent source of abuse was from other nurses (27%). Patients' families were the second most frequent source (25%), while physicians ranked third (22%) (Lavanco, 1997). However, Sofield and Salmond (2003) disputed Lavanco's (1997) findings, based on their descriptive correlation study of multiple centers in the USA with a randomly selected list of 1,000 participants (RNs). The study examined the relationship between verbal abuse and intent to leave. It showed that abuse came from several overlapping sources and that doctors were the most frequent source (62%), followed by patients (56%), their relatives (48%), colleagues (28%), supervisors (16%) and finally, subordinates (15%).

Alexander (2004) recruited 1,500 participants (allied health professionals, physicians and nurses in country practices) in Australia in a survey of the experiences of violence

and aggressive behaviour. Nurses reported experiencing the most violence and aggressive behaviour in the clinical area (68%), followed by physicians (48%) and allied healthcare professionals (47%). The most ordinary form of violence was verbal abuse, followed by threatening behaviour, physical violence and sexual harassment. In Turkey, Ayranci (2005) carried out a study with 195 registered nurses, 72.3% of whom reported that they had experienced violence in the workplace. Verbal abuse accounted for 69.5% of the violence, 53.2% was specific threats and 8.5% comprised physical abuse. In a similar study in East Anatolia, 467 registered nurses from three different hospitals reported that verbal abuse frequently came from patients' families, patients, doctors, and from other nurses (Uzun, 2003). Verbal abuse can lead to stress and inability to focus and function at work, which can increase rates of staff turnover amongst nurses.

Lin and Liu (2005) conducted a study in South Taiwan, with 205 nurses, in order to investigate the prevalence of violence in the clinical area. The results showed that the main cause of violence was related to misunderstandings and miscommunications on the part of the patients and their relatives, and because of personal problems in nurses' relationships with doctors and colleagues. A small study conducted in Ohio with 78 nurses investigated the frequency of verbal abuse by doctors; 91% of the participants reported experiencing at least one episode of verbal abuse from doctors in the preceding year, 45% several times per year, 22.5% once a month, 5.6% weekly, 22.5% several times a week and 4.3% reported experiencing verbal abuse daily. The forms of verbal abuse that caused the most stress to nurses in the study and occurred most often were anger, condemnation, abuse disguised as jokes, ignoring, accusing, blaming, judging, criticising, blocking and diverting (Cook, Green and Topp, 2001). The same authors also found that healthcare workers, particularly nurses, had a higher incidence of stress, job turnover, and feelings of low self-esteem when working in abusive and authoritative situations. Job stress resulting from verbal abuse is a major problem for nurses and other healthcare workers (Alexander, 2004; Hamlin, et al., 2004) and occupational violence and abuse is a vital factor in creating workplace stress (Hamlin and Hoffman, 2002).

In a study conducted in the UK, 50% of NHS nurses reported experiencing stress as a result of bullying, harassment and abuse. The estimated cost to the NHS of staff sickness and feeling unwell is, on average £3.6 million per year (Rodha and Bell, 2002; Paton, 2005). Stress resulting from workplace violence can lead to increased rates of medical errors and low morale (Buback, 2004) as well as increased staff turnover (Webb, 2002). Ergun and Karadakovan (2005) found that 83.5% of the violence in the workplace remained unreported because most reported cases were ignored and did not lead to subsequent legal action or internal disciplinary action.

In summary, the research reported above clearly demonstrates the importance of violence on work related stress levels amongst healthcare professionals and specifically nurses. Nurses are the largest staff group who reported stress due to violence and aggression. The researcher strongly believes that the culture and organisational structures in the KSA do little to negate instances of abusive behaviour from patients, relatives of patients and other healthcare professionals towards nurses because nurses are considered to be of lower status than other healthcare professions such as physicians, pharmacists or doctors.

3.8.6 Lack of Support from Managers and Colleagues

Lack of staff support, involvement, recognition, and rewards are considered to be another major cause of workplace stress (AbuAlRub and Al-Zaru, 2008), while positive recognition is considered to be a motivator for staff (Dielman, et al., 2003). Appreciation and recognition from the direct line manager can additionally help to fortify the nurses' confidence and identification with the organisation (Moyce, et al., 2016). Happell, et al. (2013) reported that participation of staff members in decision making has a huge positive impact on their sense of fulfilment and plays a vital role in preventing work-related stress. Anger and frustration are often directed at nursing managers, supervisors and senior nursing colleagues because junior nurses often feel their leaders and managers are absent from day-to-day activities and not providing them with enough support and recognition (Dunn, 2003). A study by Riahi (2011) describes how lack of recognition and communication from co-workers in the workplace and clinical area and poor interactional feedback contributes to role related stress. A further study by Barnes, et al. (2016) highlighted the importance of support and recognition from managers and supervisors on stress and turnover and reported that support and recognition decreased the level of stress for nurses and improved outcomes for nursing turnover.

Byrne, et al. (2004) reported concerns raised by students and new arrivals to hospital posts (junior nurses) who felt ignored and isolated by the senior nurses assigned to be their mentors. Mentorship enables novice nurses to perform in a more reflective and holistic way and is crucial to maintaining quality standards in nursing (Ronsten, et al., 2005). In a Swedish study of student nurses, which sought to identify where in the healthcare system they preferred to work after completing their nursing degree, results showed that nursing students were largely isolated and had no apparent support system. This reinforced feelings of ambivalence and reluctance towards working in healthcare organisations in the future (Fagerberg, Winblad and Ekman, 2000).

Olofsson, et al. (2003) evaluated nurses' experiences from an emotional point of view regarding stress in clinical areas. They discovered that one key deficiency reported by

nurses was the absence of recognition for completed tasks and the lack of recognition from senior nurses and managers of stress signals. McGrath, et al. (2003) supported this finding when they concluded that a lack of positive support, professional development, constructive feedback, and recognition from managers and senior nurses in the nursing profession led to and created stress in the workplace. Nurses who received support from colleagues and senior nurses experienced lower levels of job stress (AbuAlRub, 2004), and those who received continuous feedback and support from colleagues enjoyed their work environment which, in turn, improved the quality of care provided to patients. The study also reported that supported nurses felt happy and comfortable in asking for help from other colleagues to prevent errors and improve their skills (AbuAlRub, 2004).

De Dellis, et al. (2001) adopted a qualitative approach in their investigation of junior nurses' perspectives regarding the support they received from managers and senior nurses in South Australia. The results suggested that fast paced and unpredictable working environments and lack of support were recurrent themes from the nurses' perspective. It was reported that when managers used supportive behaviours, such as positive recognition, nurses expressed greater intentions to remain in their current positions (Connelly, 1997; Wilson, 2006; AbuAlRub and Al-Zaru, 2008). Similarly, in a comparative study of burnout by Gillespie and Melby (2003), the results indicated that the absence of support from colleagues, along with inadequate leadership and management skills, increased stress in the workplace. Thus, one of the critical recommendations from this study was to train the senior nurses and supervisors to implement effective leadership skills to provide adequate support and feedback.

This literature has demonstrated the importance of leadership style and the necessity of having a leader or role model in clinical areas by showing how work related stress levels can be decreased amongst nurses if senior staff and supervisors implement effective leadership, provide regular feedback and extended support, and recognise and acknowledge good performance (Riahi, 2011). In summary, the realisation of job development and professional growth are effective in decreasing job stress among nurses (Khamisa, et al., 2015). A nursing employee may become recognised, appreciative and feel acknowledged in the clinical area when he or she obtains job satisfaction by receiving what they believe is important for themselves and their confidence and self-esteem. This illustrates the connection between needs recognition, satisfaction and motivation (Lambrou, et al., 2010).

3.8.7 Stressors Associated with the Transition to Becoming a Registered Nurse

When an employee starts in their role, they initially experience a deal of passion for their chosen job. The newly graduated employee is usually full of vitality, well prepared

to work hard and finds his or her job stimulating and motivating. Nevertheless, if this primary eagerness is changed by situations such as lack of, or poor supervision, poor involvement, obstruction and lack of management, the new employee starts to feel sceptical, unappreciated, unsupported, ignored and undervalued. It is these situations that lead to nurses to experience a feeling of cumulative powerlessness in the clinical area and feelings of stress after he/she starts to withdrawal physically and mentally (Al-Nusair, 2017). Schabram and Maitlis (2016) state that many workers experience fulfilment when they accept that their future prospects are high. This may transform into open doors for professional growth and development in their current working environment or enhance the possibility of identifying alternative employment.

Although newly graduated nurses face difficulties in coping with and adjusting to working in clinical areas, healthcare institutions expect them to rapidly assimilate into their environments and to begin functioning as competent practitioners (Casey, et al., 2004). However, Casey, et al. (2004) found that newly graduated nurses do not feel knowledgeable, skilled, competent or comfortable during their first year as a registered nurse. They highlighted the need for longer orientation and monitoring periods during the transition from being a nursing student to becoming a staff nurse in the workplace, with all the responsibilities and duties that entails. During the orientation period, new nurses must try to hold on to work and consolidate the values they learned in college, or policies from previous departments with roles which might otherwise lead to a clash between the transition from being a student to becoming a clinical nurse (Higgins, 2003).

Several researchers have highlighted the importance of providing a one-year transition and support period (as in medicine), to mediate entry into the nursing profession, enabling the newly graduated nurse to gain skills of adjustment, learn how to cope, and become aware of how and when to seek help and support (Clare and Van Loon, 2003). Some newly registered nurses experience various unfamiliar and stressful situations when they enter their new working environment due to their lack of experience and clinical and administrative skills, a heavy workload, and a lack of help or support. In contrast, others have a positive transition with a lot of support from their clinical mentors and managers (Maben, 1996; Huang, 2004). In a quantitative study (Floyd, 2003), 50% of participants felt the orientation period was not long enough. Factors that acted as transitional barriers for newly graduated nurses included the increased use of technology, dealing with sick patients, shortages of staff, and complicated interventions.

Stress can also affect senior nurses when they travel to other workplaces or countries, especially to the KSA, as they will start as a new junior, resulting in them having to face the challenges of a new job in a new clinical area (Higgins, 2004; Al-Nusair, 2017) and

finding they require support and guidance. Transitions are complex and multidimensional as a result of changes in life, health, relationships and environment (Meleis, et al., 2000; Al-Nusair, 2017). Transition and changes play a vital role in determining stress and satisfaction for newly qualified nurses as well as senior nurses when they face a new work environment such as moving from one specialty to another (for example moving from cardiac ICU to neurology ICU).

Goh and Watt (2003) conducted a qualitative research study in Australia with newly qualified nurses who had completed their first year of clinical placement. Three main themes were identified in the study. The “first steps” described the unexpected shock and feeling of being unprepared on entry to the work environment along with the unrealistic expectations of colleagues; “stumbling blocks” described the multiple roles and personal stressors that challenged participants; and “striding ahead” described the factors that facilitated the participants’ adaptation to the registered nurse’s role. To overcome these problems, they recommended an increase in clinical placements for student nurses in the last year of studying before they qualify, shadowing nurses in the clinical areas. In addition, they suggested provision of short transition courses for new nurses who move from one specialty to another, such as transferring from a ward to working in intensive care.

Some authors have highlighted the issue of competency as a source of stress for the newly qualified nurse. Al-Mahmoud (2013) defined nursing competency as the ability of a staff nurse to fulfil the nursing role effectively. Al-Shehri (2013) reported that newly qualified staff nurses, as in any profession, have sufficient theoretical knowledge but a lack of competency in respect of basic nursing skills and difficulty in bridging the gap between the two. Therefore, post-graduate courses such as transition courses, are focussed on helping newly qualified nurses to bridge the knowledge and practice gap. It is not surprising that newly qualified nurses prefer to look after and care for stable and less critical patients who need less complicated nursing and interventions (Ramritu and Barnard, 2001). Huang (2004) concluded that nurses face difficulties in coping with and adapting to the new workplace as they navigate the transition from nursing student to newly qualified nurse, consequently finding it stressful. Watson, et al. (2008) investigated the difference between work related stress and life events in contributing to psychological distress among 359 newly qualified nurses and student nurses and found that nurses experienced negative outcomes in their jobs, as a result of stress and psychological distress.

In summary, job stress has overtaken musculoskeletal disorders as the main cause of sickness among the healthcare professionals. Many studies have highlighted that

nursing is one of the most stressful jobs amongst healthcare professions, and the intensive care unit is one of the most stressful areas for nurses to work in. Several recent studies have drawn a link between stress and burnout, and performance and patient outcomes. Various common stressors for nurses, especially intensive care nurses, have been investigated and identified in many recent nursing studies. These include workload, conflict, caring for the dying patient, shift patterns, violence and abuse, and lack of support and recognition from leaders and managers.

3.9 Job Satisfaction

Job satisfaction is an important and basic component of nurses' lives. It can affect patient safety and quality of care, staff morale, productivity and performance, retention and turnover, as well as commitment to the organisation and the profession. In addition, it affects replacement costs and can hinder attempts to hire and orientate new staff (Murrells, et al., 2008). Job satisfaction was defined by Graham (cited in Lalwani, 2012 p.45) as, "the measurement of one's total feelings and attitudes towards one's job". Mrayyan (2005) defined job satisfaction as the degree to which employees enjoy their jobs, while Adams and Bond (2000 p.439) defined it as, "The degree of positive affect toward a job or its components". They described job satisfaction theories whereby one can examine, within the workplace, the scope to which the wants and needs of staff are satisfied. This involves equity theories, which highlight social comparisons in the appraisal of job rewards, and expectancy theories, which focus on staff motivation. Job satisfaction was defined, more practically, by Purani and Sahadev (2008) as the measure of various aspects such as satisfaction with the management, with the work team, or satisfaction with work reward and appreciation. However, Lalwani (2012) produced a broader definition of job satisfaction as "a pleasurable or a positive emotional state resulting from appraisal of one's job or job experiences" (p.45).

For the purpose of this research, job satisfaction is defined as *the positive mood and motivational emotion towards nursing by performing tasks which result in enjoyable feelings*.

Job satisfaction amongst nurses varies in different specialties of nursing work (Utriainen and Kyangäs, 2009). Ingersoll, et al. (2002) identified it according to the place of employment, clinical area, and nursing role. Boyle, et al. (2006) found that the most satisfied nurses are those who work in paediatric wards, and the least satisfied are those nurses who work in surgical and emergency departments. In contrast, Kovner, et al. (2006) commented that the most satisfied nurses are academic nurses who work in

nursing education, because of the stability of work, fixed shifts with no duties at weekends or public holidays and because of the absence of abuse or aggression towards them. There is evidence linking nurse shortages with low job satisfaction as nursing shortages can lead to dissatisfaction and stress for nurses (Griffin, et al., 2010, Lu, et al., 2012). Job satisfaction is therefore crucial to nursing professionalism as it is a fundamental predictor of retention (Tett and Meyer, 1993; Irvine and Evans, 1995; Cowin, 2002; Tourangeau, et al., 2006), and job dissatisfaction can lead nurses to leave the profession. It is therefore important for all health organisations to pay attention to the levels of job satisfaction amongst their nursing staff (Mrayyan, 2004; Coomber and Barriball, 2007). Fried, et al. (2008) conducted a meta-analysis to investigate the connections mediating the effects of job satisfaction and intention to leave on role stress, and work performance. The findings reported that employment stress was linked with job performance both specifically and indirectly through job satisfaction and intention to leave; that is, if employees were satisfied with their employment, their performance, outcome and gainfulness expanded, while dissatisfied workers' apparent performances fell short of those of satisfied employees.

Job dissatisfaction, resulting in a lack of institutional commitment and loyalty amongst staff, has been found to be related to withdrawal behaviours such as lateness, absenteeism and staff turnover (Yousef, 2000). Elevated levels of job satisfaction, on the other hand, can increase staff productivity, improve patient outcomes and benefit the productivity of the organisation (Buitendach and de Witte, 2005, Spence Laschinger, et al., 2009). This was confirmed by Cai and Zhou (2009) when they investigated the relationship between empowerment and job satisfaction among 198 nurses in China. The results showed that moderate job empowerment and satisfaction were negatively related to turnover intention. According to Cowin (2002), the success and effectiveness of any strategy designed to improve recruitment or retention in the nursing profession will depend upon an adequate understanding of the factors that influence nurses' job satisfaction.

There is a positive relationship between job satisfaction, turnover and retention among nurses (Chen, et al., 2008). High turnover rates and the numbers of nurses leaving the profession are indicative of a general dissatisfaction with their profession. In a study sampling a large number of nurses from the USA, Canada, Scotland, England and Germany, nurses reported elevated levels of job dissatisfaction (Aiken, et al., 2001a). Several studies have shown that job dissatisfaction is the main cause of staff turnover (Ingersoll, et al., 2002; Larrabee, et al., 2003) and this is upheld by McCarthy, et al. (2007) who argue that as the level of nurses' job satisfaction increases so does the intention to remain employed. However, in a recent Australian study, conducted by

Hayes, Douglas and Bonner (2015) among 417 haemodialysis nurses, the researchers concluded that even with acceptable levels of satisfaction, burnout was still found to exist. In addition, stress due to workload, which can affect patient care was also found. Questions might be asked as to why people still train to be nurses, or why some nurses stay in the profession for years in spite of the difficulties, but nursing schools in many countries around the world provide nursing training for free, and in some countries, enrolment into nursing school is based on attainment marks in secondary high school where there is no choice other than nursing because that is all the universities will offer. In essence, a lot of nurses dislike the idea of change and will prefer to stay in the profession rather than initiate and implement the change to a new career, even though they are stressed and dissatisfied (Hayes, Douglas and Bonner 2015).

Several factors are known to improve job satisfaction amongst nursing staff including, but not limited to, the leadership style of the manager in the unit, effective communication skills between nurses and other disciplines, absence of stress and tension, and continuity of care (McGillis and Irvine, 2001; Aziri, 2011). Nurses' job satisfaction levels can be increased by effective communication between nurses, and some researchers have focused on forecasts of job satisfaction such as "colleaguemanship" and regularity (Adams and Bond, 2000; Kovner, et al., 2006), nurse-to-nurse interaction (Boyle, et al., 2006; McLennan, 2005), partnership, and effective communication (Bécat, et al., 2005). Other researchers (McNeese-Smith, 1999; Makinen, et al., 2003; McLennan, 2005) highlighted patient care as the most crucial factor in increasing nurses' job satisfaction. Several studies have argued that the provision of high-quality care to patients is the key factor for job satisfaction for nursing staff (Newman and Maylor, 2002; Bécat, et al., 2005; Perry, 2005). In other words, it is a self-reinforcing cycle between nursing satisfaction and patients' care, whereby high satisfaction can improve patients' care, and positive patient outcomes can encourage and increase job satisfaction.

Other factors that influence nurses' job satisfaction include:

- education and development (Watson, 2002; McNeese-Smith and Crook, 2003; Strachota, et al., 2003; Aiken, et al., 2008)
- intelligence and clinical experience (Foley, et al., 2002; Ma, Samules and Alexander, 2003; Mrayyan, 2007)
- position in the hierarchy (Ma, et al., 2003)
- job description (outcomes, job security, work schedules and salary) (Kettle, 2002)
- co-workers (Wilkinson and Hite, 2001)
- the patient-to-nurse ratio (Aiken, et al., 2002)
- the recognition that they receive (Strachota, et al., 2003)
- the delegation of decision making (Raferty, et al., 2001; Upenieks, 2002)

- hospital fringe benefits (Hinshaw and Atwood, 1984; Al Ma'aitah, et al., 1996; Fletcher, 2001; McNeese-Smith, 2001; Kettle, 2002; Cuhng, et al., 2003; Ma, et al., 2003, Mrayyan, 2005)

Ingersoll, et al. (2002) conducted a quantitative study in New York, sampling 4,000 staff nurses from the six-county Central Finger Lakes region, using two common, validated and reliable questionnaires (Job Satisfaction and Effective Commitment). The aim of the research was to identify the characteristics of a nursing workforce representing the mixed urban/rural region of New York State, in order to determine nurses' levels of job satisfaction. The results showed several variables affecting the levels of job satisfaction such as age, current education background, primary nursing role, primary employment setting, and primary specialty area. Older nurses (those over 50), such as managers, were more satisfied than younger nurses (under 50) because of their greater experience of life and the nursing profession and their ability to use different coping mechanisms compared to junior nurses. Nurses qualified at the postgraduate level were more satisfied than baccalaureate holders. Nursing educators reported the highest degree of satisfaction of any nursing group. The next most satisfied were the advanced practice nurses, who were more satisfied than nursing managers and administrators. Staff nurses reported the lowest levels of satisfaction.

Ingersoll, et al. (2002) reported that those employed in schools or colleges of nursing were significantly more satisfied than those employed in hospitals: a finding that was confirmed by Kovner, et al. (2006). The number of years of experience was found to be key in this study as it showed that nurses with more years of experiences were more satisfied with their job. Another key was the level of education, with nursing educators reporting greater levels of satisfaction. The study concluded that nurses with more years of experience or with higher education, use strategies and mechanisms for coping with stress and consequently can improve their levels of satisfaction. An additional factor was receiving a higher salary, as more experienced nurses generally earn more and tend to work more fixed shifts. These results were supported by a large study that recruited 6,541 participants in Canada where Wilson, et al. (2008) investigated and explored the generational differences in levels of job satisfaction using the same McCloskey and Mueller Satisfaction Scale (MMSS) as Ingersoll, et al. (2002). In this research, the participants were categorised into three age groups: Baby Boomers (born 1946-1964), Generation X (1965-1979) and Generation Y (1980 onwards). The results showed that nurses in the Baby Boomer cohort were the most satisfied in terms of their overall job satisfaction, pay and packages, and shift scheduling. The authors concluded that age was linked to seniority and played an important role in job satisfaction since most of the

older nurses were managers or in other senior positions and were more likely to hold postgraduate degrees.

A mixed-method study by Upenieks (2002) investigated the difference in job satisfaction levels between nurses employed by two Magnet and non-Magnet hospitals and the role of nursing leaders in determining the levels of job satisfaction amongst nursing staff. Magnet status (nursing excellence) is an award given by the American Nurses' Credentialing Center (ANCC), an affiliate of the American Nurses Association, to hospitals that satisfy a set of criteria designed to measure the strength and quality of their nursing. To do this they used the Revised Nursing Work Index tool. Seven hundred questionnaires were distributed and 16 nurse leaders from each hospital were interviewed. The results from analysis of the interview data and from the 305 completed questionnaires reported that nurses at Magnet hospitals were more satisfied. The difference in satisfaction levels was related to the effective role of nurse leaders or managers and was attributed to greater visibility and responsiveness, better support for clinical nurses' autonomous decision making by Magnet nurse leaders and greater support of a professional nursing climate at Magnet hospitals (e.g. adequate staffing in the workforce).

Chung, et al. (2003) conducted a cross-sectional study to determine contributors to job satisfaction and dissatisfaction using the McCloskey/Mueller Satisfaction Scale (MMSS) and the Index of Work Satisfaction questionnaires (IWS). Seven thousand five hundred anonymous questionnaires were sent to staff nurses in South Carolina, of which 3,472 (46.3%) were returned completed, which is considered a good response rate for a postal questionnaire. Analysis showed that over the last two years, two-thirds of participants had either maintained their level of job satisfaction level or that it had decreased. They also found a difference in job satisfaction levels based on variables such as years of service, job position, hospital retention plan and geographic area. The study recommended that nurse and hospital managers should plan and implement effective healthcare policies and strategies tailored to their unique staff and organisation.

In a study conducted into the relationship between satisfaction and turnover by Takase, et al. (2005) using a quantitative approach to nurses' job satisfaction and intention to leave, the authors highlighted that nurses react passively to the surrounding work environment. This study recommended that management look at the relationship between person and environment, rather than just environmental factors alone.

In a more recent study conducted in Jordan, Mrayyan (2007) investigated the factors influencing Jordanian nurses' job satisfaction, their overall level of job satisfaction and the difference in job satisfaction between ICUs and wards. A descriptive design using

the MMSS was used. Two hundred questionnaires were distributed amongst nurses working in a private hospital 120 of whom completed the questionnaires (41 were from critical care and 79 from wards). The results demonstrated that nurses were moderately dissatisfied with their job. Ward nurses reported slightly higher levels of job satisfaction, which was explained by the fact that critical care nurses faced higher levels of stress and the challenges of meeting the complex needs of critically ill patients and their families (Bratt, et al., 2000), as well as critical care nurses having greater responsibilities in respect of clinical decision making (Chaboyer, et al., 2001). Co-workers were the most-ranked indicator of nurses' job satisfaction, influencing teamwork, mutual respect, and communication (Hite, 2001; Al-Nusair, 2017). On the other hand, a lack of professional opportunities predicted nurses' job dissatisfaction (Foley, et al., 2002; Ma, et al., 2003; Wilkinson and Hite, 2001) as experienced nurses have stronger attitudes toward professionalism (Hooi, et al., 2000). Nurses' years of experience was weighted highest in predicting their level of job satisfaction. Mrayyan (2007) stressed that restricted scheduling and night shifts caused frustration and dissatisfaction, a finding which is supported by several other studies (Fletcher, 2001; Kettle, 2002; Snow, 2002; Strachota, et al., 2003). Mrayyan (2007) recommended that in order to increase job satisfaction it was necessary to improve the family/work balance by increasing flexibility in part-time work or shift swapping, increasing maternity leave and childcare facilities and offering professional development opportunities such as providing nurses with enough time and internet access to be involved in the publication of nursing research. These recommendations were consistent with the findings of several other studies (Abu Salem, 2000; Thompson and Brown, 2002; Yaktin, et al., 2003) which highlight the complexity of seeking to improve job satisfaction amongst nurses.

Other researchers have looked at nurses' working environments in relation to their outcomes and levels of job satisfaction. There is a strong link between the physical hospital environment (including construction and unit characteristics) and nurses' satisfaction and turnover (McGillis Hall, 2003; Jones, 2008). Few studies have explored the differences between working environments in urban and rural hospitals; however, the vacancy rate in rural hospitals is greater than in urban hospitals within the USA. According to Skillman, et al. (2007) the reason for this is perhaps due to the differences in salary between rural and urban hospitals, whereas Bearnhold and Mark (2009) ascribed it to the differences in the working environment between rural and urban hospitals.

Several researchers have investigated the levels of job satisfaction and staff turnover amongst nurses in Magnet accredited hospitals, as recognised by the American Nurses Credentialing Center (ANCC). It has been clearly reported in several studies that nurses

are more satisfied in Magnet hospitals (Brady-Schwartz, 2005; Lacey, et al., 2007; Ulrich, et al., 2007; Schmalenberg and Kramer, 2008) and have more intention to remain in their jobs, which in turn is reflected in lower staff turnover rates (Lacey, et al., 2007).

A study by Bozionelos (2009) involving 206 nurses working in the KSA aimed to investigate the relationship between job satisfaction and nursing turnover to identify the influence of implementing various strategies such as cross-cultural training, mentoring, peer support and culture. The results showed that 'years of experience' was the most significant influence on the level of job satisfaction and turnover, while cultural training had no influence. Years of experience and peer support for expatriate nurses increased the level of satisfaction for expatriates of Arab origin. In another research project, Al-Faify (2013) studied 113 Saudi radiologists in the Eastern region of the KSA. The study aimed to identify the relationship between job stress and job satisfaction in an acute environment. The findings showed a significant correlation between job stress factors and overall levels of satisfaction, along with another correlation between level of satisfaction and working environment.

In summary, the level of nurses' job satisfaction should be a real concern for any health care institution. Low job satisfaction can lead nurses to leave their job or change career. There are several variables that lead to high job satisfaction including a positive perception of the nursing leadership in the clinical area, absence of role tension, effective communication among nurses and other healthcare teams, continuity of care, demographic variables such as age and gender, job characteristics, organizational environment factors, interpersonal relationships, and co-workers. It is in the best interests of managers in any health care institution and organization to seriously consider nurses' job satisfaction.

This section has explored key areas that need extra study in the wider organizational context and perspective of job satisfaction amongst nurses in adult intensive care environments in the KSA. Several key factors have been identified as increasing and improving job satisfaction, including but not limited to; salary, leadership style (communication), type of intensive care unit and opportunities for personal and academic development.

Several important variables have been identified that affect the level of satisfaction among nurses, such as educational level, years of experience and the work environment. Job dissatisfaction can adversely affect turnover and intention to leave.

3.10 Discussion and Implications for this Study: The ‘gaps’

Most of the research investigating job stress and satisfaction among ICU nurses has been carried out in developed countries. Little research has been conducted to investigate the phenomena of job stress and satisfaction in developing countries and in the Gulf region, including the KSA. As was discussed in Chapter Two, the KSA has a particularly unique work environment in a diverse cultural setting. This chapter has presented a review of the literature that has recognised the increased awareness of work-related stress amongst nurses, especially those in ICUs, which is resulting in elevated levels of staff turnover and increasing costs to the healthcare system. A considerable proportion of the adverse events which contribute to turnover are associated with high levels of stress and low job satisfaction amongst nurses. Despite the wealth of international studies on job stress, the research that has considered critical-care nurses in developing and non-Western countries such as the Kingdom of Saudi Arabia is severely limited. Previous studies have emphasised organisational contributions to the levels of stress and job satisfaction in critical-care settings, but have overlooked the context and immediate environmental issues, and failed to seek the perspectives of intensive-care nurses in the context of the KSA. By looking closer, the little available research on job stress that has been conducted in the KSA provides a relatively weak knowledge base. Currently, we need more solid evidence with which to increase awareness, empower policy makers, motivate action and help in creating a framework to deal with job stress and dissatisfaction among ICU nurses.

The literature focuses on a range of stressors that influence the levels of job satisfaction in nursing, correlating them with the nature of nursing work and the current healthcare and working environments. In a broad sense these sources of stress include and raise concerns regarding workload, dealing with dying patients, shift scheduling, conflict, violence and aggression, lack of support and leadership skills and clinical competence as a newly registered nurse (Damit, 2007) but the previous section also identifies other specific sources, such as opportunity for development, role clarity/ambiguity and interpersonal/interprofessional relations. Workplaces are complex environments with some aspects imposing demands whilst others might be considered as resources that help ameliorate or can worsen the extent and/or impact of those. This positioning of potential sources of workplace stress is considered later in relation to the theoretical underpinning of this thesis.

The literature indicates that fundamental changes in healthcare systems and the international shortage of nursing staff (Wilson, et al., 2008) have implications for work-related stress experienced by nurses, especially critical-care nurses. The literature

reviewed in this chapter has emphasised a relationship between work-related stress, job satisfaction and staff turnover which might reflect on patient care and staff performance. Moreover, most of the research has indicated that a lack of job satisfaction plays a vital role in the intention of nurses to leave their jobs (Williams, 2003). There is no question that the level of stress experienced by nurses' influences job satisfaction. Exploring and understanding the relationship between work-related stress and job satisfaction and the influence that they have on staff turnover could help administrators and leaders to retain nurses and reduce nursing shortages, which in turn could save money for healthcare institutions and improve their efficiency. Most of the (little) research conducted in the KSA has only partially addressed conflicts in nursing (Zakari, 2010), the nature of healthcare (Aldosary, et al., 2008), and the effects of cultural diversity on expatriate nurses (Almuairi, 2012). The lack of consistency in results might be a function of variation in the dimensions of stress and satisfaction assessed and the use of different tools with different levels of validity and reliability. Therefore, only an incomplete picture of the stress levels, stressors and job satisfaction levels amongst critical-care nurses in KSA has so far emerged. More research is needed to explore work related stress and levels of job satisfaction amongst the critical-care nurses who work in the KSA, using a valid and reliable measurement tool that suits the nursing population of the country.

From this chapter and discussion the issues ('gaps') pertaining to this thesis can be summarised as:

- Workplaces are complex environments with some aspects imposing demands whilst others might be considered as resources that help ameliorate or can worsen the extent and/or impact of those. Exploring and understanding the relationship between work-related stress and job satisfaction could help administrators and leaders to retain nurses and reduce nursing shortages
- Despite the wealth of international studies on job stress, research that has considered critical-care nurses in developing and non-Western countries, such as the Kingdom of Saudi Arabia, is severely limited and provides a relatively weak knowledge base.
- Most of the (little) research conducted in the KSA has only partially addressed conflicts in nursing, the nature of healthcare, and the effects of cultural diversity on expatriate nurses. Therefore, only an incomplete picture of the stress levels, stressors and job satisfaction levels amongst critical-care nurses in KSA has so far emerged.
- Previous studies have overlooked the context and immediate environmental issues to fully understand perspectives of intensive-care nurses in the context of the KSA.

In acknowledging these gaps in the literature, this research examines work related stress and job satisfaction levels by identifying the most common stressors amongst intensive-care nurses in two hospitals in the KSA, with the aim and objectives outlined in the following chapter.

As has been shown in the literature, few studies have been conducted on stress using mixed methodologies. It was therefore important to my research questions and objectives to use more than just a quantitative methodology, which most of the research to date has used, and for this reason I chose to employ a mixed methodological approach to my research. The reason for this decision relates to the following strengths of such an approach; firstly, the advantage of the study design means that the quantitative arm can supply a rich of diversity of information from a large sample size; secondly, the strength of study design means that the quantitative information element can extend the data analysis potential, thereby making the data more robust. Finally and significantly, the qualitative element of a mixed methodology enables the capture of individualised experiences that are not collectable by using quantitative statistics. By examining the phenomenon of stress from a different philosophical perspective, a greater depth of knowledge can be obtained about the lived experiences of stress and job satisfaction amongst ICU nurses. As Bryman (2003, p12) concludes, "When quantitative and qualitative research are jointly pursued, much more complete accounts of social reality can ensue." I will return to a deeper discussion of the methodology and methods in the following chapter.

3.11 Chapter Summary

The factors that influence job stress and satisfaction are well investigated in the literature, and some papers have examined the importance and effect of these phenomena on turnover, retention and cost for healthcare institutions. Evidence from the KSA has identified the presence of stress among nurses there and highlighted the effect of stress, among nursing staff, on burnout and intention to leave their job or the profession.

This chapter has presented a review of existing literature on job stress, burnout, and job satisfaction. It shows that as world health continues to evolve it is experiencing challenges, especially a shortage of nurses, and this is particularly so in the KSA. The literature review discusses the different sources of stress in ICU nurses (stressors) and its links with job dissatisfaction amongst nurses. According to the existing literature, the most frequent stressors for nurses, though not the only sources, appear to be "workload" and "conflict", as highlighted in different research from all over the world (Emilia and Hassim 2007; Hoolahan et al 2012; Garcia-Izquierdo and Rios-Risquez 2012; Al Nusair 2017).

As there has been minimal research conducted on this subject in the KSA, it is impossible to establish a full picture of the phenomenon of stress among intensive care nurses in

the KSA. The existing research findings can therefore only be generalised to all nurses and not necessarily to ICU nurses living and working in the KSA.

The literature has highlighted problems found in some studies which did not adequately define the concept of job stress and its related prevalence. The sparsity of evidence and information in the literature consequently provides justification for the further investigation of job stress and satisfaction among ICU nurses in the KSA.

This study therefore aimed to:

- explore the level of work-related stress and job satisfaction in expatriate ICU nurses in KSA.
- explore the positive causes of stress (main stressors) in the same population.

The research questions that the study sought to answer were:

- 1) What is the overall level of intensive care nurses' job stress?
- 2) What is the overall level of intensive care nurses' satisfaction?
- 3) What are the factors (stressors) that influence intensive care nurses' job stress and satisfaction?

The methodology and methods applied to explore and gain information to answer the research's questions and objectives are developed in Chapter Five.

CHAPTER FOUR

Theoretical Framework

4.1 Introduction

Research is more valuable, valid and robust when it is based on a theoretical framework (Al-Nusair, 2017). Theories are proposed by researchers to allow investigation and exploration of the nature of relationships between two or more concepts in a study (Parker 2005). Hence, a theoretical framework is defined as a conceptual model of how one theory makes reasonable sense of the relationships among numerous issues that have been recognised as significant to the problem under investigation (Cargan, 2007). A conceptual or theoretical framework is essential in any research study and supplies the study with strong accreditation (Parker 2005, Faweet and Downs, 1992).

In the context of this research the issue of job stress is recognised as a major issue in developing nations that are often prone to rapid and serious economic and social crises, and where there is an extended interest in how well immigrant employees are able to cope, a lack of job-related wellbeing frameworks and poor working environments as in the KSA (Ortiz 2013). The existing division between working situations and (physical) work environment makes the discussion of job stress difficult to distinguish by many Health and Safety experts (Houtman et al 2007; Ortiz 2011). Even though research has recently begun to report on the range of causes and outcomes of job stress, it is still a problem which is a long way from being fully understood. To compound the issue, in many developing countries including the KSA access to official data (where it exists) is restricted or prohibited to researchers (Ortiz 2011), thereby preventing any evaluation of the level of employment strain resulting from factors such as psychosocial stressors and, importantly, precluding the prospect of being able to contrast the outcome of assessments and research with that from countries in which data and research is more prevalent. Such evaluation is necessary to maximise the awareness and implications of job stress as a problem in these countries and to enable and enhance further research.

Most job-related stress studies in nursing have concentrated only on the clinical areas; hence other researchers have stressed the need to take into consideration the wider context by highlighting the shared factors of the main theories of job stress (Cox and Griffiths, 2010). Their key points are that the main theories provide an ideal structure in which to describe an arrangement of methodologies which involve both environment and the individual, mental, physiological and behavioural components and the ways in which

these components communicate with the more extensive link to the specific social, authoritative and societal situations (Cox and Griffiths, 2010).

Work-related stress has been recognized as an after-effect of poor working environments causing mental, psychological and physical health problems (WHO, 2010). Job stress has been seen both as an input factor, and as an outcome of statutes that lead to stress, making it problematic to differentiate between input and outcome (D'Amato and Zijlstra, 2003). For example, some researchers have identified sickness and anxiety as being a result of working conditions and the work environment, while other researchers have recognised work-related stress as being a cause of mental wellbeing problems (Moustaka and Constantinidis, 2010). This can lead to confusion in understanding the differences between the reasons for, and outcomes of, job stress which in turn influences how the interactional nature of stressors and the surrounding environment are explored. (WHO, 2010).

This chapter discusses and investigates some of the theoretical models used in previous studies to focus on the issue of work-related stress and job satisfaction. The chapter then describes the framework that underpins the research within this study. The provision of a clear conceptualization of work stress and stressors is needed before initiating such a study and determining a theoretical framework that suits the aim of the study (Vrijmoet-Wiersma, et al., 2008).

4.2 Job Stress Models

There are many theories and models of job stress (El Shikieri and Musa, 2012). Each has its specific concerns and, in some respects, its inadequacies. For example, McVicar (2016) identified 81 articles, published between 2000 and 2013, and analysed 28 of them to apply the Job Demands-Resources model of job stress (Demerouti et al. 2001) in order to identify if overlaps in dimensions of workplace stress and job satisfaction might suggest stress interventions would also likely improve job satisfaction. The analysis concluded that job satisfaction issues in the nursing profession might be co-responsive to stress management interventions. However, there is no widely accepted model that thoroughly explains the concepts of work-related stress and job satisfaction (Lu, et al., 2012). A major reason for this is the lack of standard definitions for many of the concepts involved in work related stress and job satisfaction (Becker, et al., 2010; Dietschmann and Koniger, 2010). Many scholars have emphasised the need to be aware of, and the ability to differentiate between, three closely related terms when investigating stress

models: stressors, stress and strain (Francies and Barling, 2005; Vrijmoet-Wiersma, et al., 2008).

Stressors are defined as the external events encountered by an individual, such as conflict in the clinical area or increases in work demands that contribute to the experience of stress (Sauter, et al., 1990). Stress is an individual's internal response to a stressor and is characterised by arousal or dissatisfaction and displeasure (Francis and Barling, 2005). The same authors highlighted that 'strains' explain the long-term effects of stress which may include physiological symptoms and anxiety and depression.

The literature includes many models which can be used to explain work-related stress and job satisfaction for nurses in clinical areas. For example, Dobratz (2008) used the job stress model for nurses based on Roy's adaptation model developed by Roy and Andrews (1990), whilst McVicar (2016) adopted the Job Demand-Resource model to explore the potential for stress interventions to improve job satisfaction. Furthermore, many studies (see below) have applied the Cooper and Baglioni (1988) model to identify the relationship between the source of stress (stressor) and the response to that stress, including coping strategies. The application of such models is explained in more detail in the next sub-sections which discuss the development of four of the most recognized models for work-related stress and satisfaction, namely the Job Demand Control-Support (JDC-S) model (Karasek, 1979; Johnson and Hall, 1988), the Effort-Reward Imbalance (ERI) model Siegrist, and Weber, 1986; Siegrist, 1996), the Cooper and Baglioni (1988) model, and the Job Demands-Resources (JD-R) model (Demerouti, et al. 2001).

4.2.1 The Job Demand-Control Model

The Job Demand Control (JDC) model was proposed by Karasek (1979): it suggests that work-related stress (WRS) is mainly brought on by a combination of high workload requests, such as extended job requests, and low job control. The JDC model was one of a type in that it focused on psychosocial needs and physiological needs and their link to the daily environmental stressors faced by staff working in a clinical environment (Karasek and Theorell, 1990). This model conceptualises staff strain as a content of the work environment that needs control (Karasek, 1979). The model was later revised to include 'Support' as an integral feature (JDC-S; see Johnson and Hall, 1988).

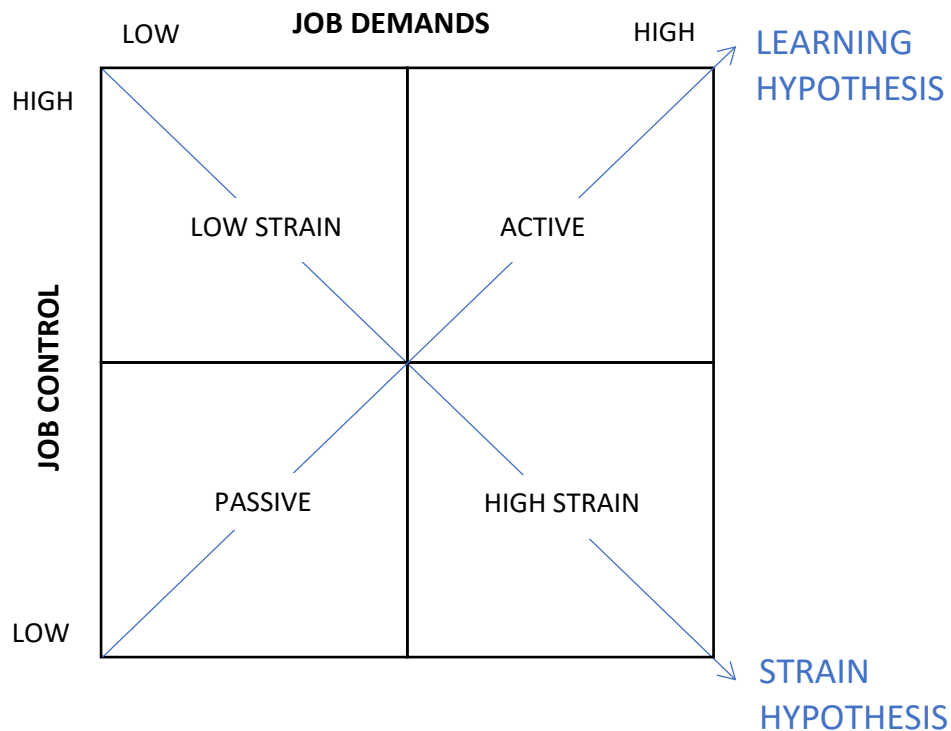
As represented in Figure 1 below, the model presents two speculations identified as the "learning hypothesis" and the "strain hypothesis" (Van der Doef and Maes, 1999) and has come to be regarded as the most influential model for investigating WRS (Demerouti, et al., 2015). Work demands allude to increased workload or extra tasks or time pressures (Karasek, 1979). 'Job control' is founded on the idea of talent, prudence and

practicality and freedom to make choices (i.e. the employee has the power to make decisions about their future to achieve their targets). This enhances an individual's feelings of efficacy and ability to cope within their environment, allowing the advancement of aptitudes and promoting the capability to learn (Karasek, 1979).

The 'strain hypothesis' has earned much attention in the literature. It states that a low level of popularity and of level of control will lead to mental strain (Bakker and Demerouti, 2006). For example, immigrant nurse employees are required to adapt to their new employment quickly, caring for very sick patients with little support from seniors in adjusting to the new culture and diverse environment; in addition, it is very common for nurses, especially immigrant nurses in the KSA, to have no power in any decision making, whilst lacking self-confidence, having to endure low salaries and feeling insecure in their job. This is acknowledged as a primary 'wellspring' of job-related stress, which is recognised as a psychosocial risk. To compound this, nurses feel that they are subservient to, and controlled by, other healthcare professionals such as physicians; other healthcare professionals in the KSA tend to be prioritised ahead of nurses (Aldosary, et al., 2008).

The 'learning theory' states that acceptance occurs when a person feels that any extra workload and demands are also associated with a high degree of power control (Van der Doef and Maes, 1999; Bakker and Demerouti, 2006). It is based on the assumption that extended power control in clinical areas will permanently affect an individual's aspirations to learn (Park, 2007). It is proposed that a high level of power control allows employees to cope with high workload levels, whilst minimising the risk of strain and having a positive effect on learning (De Lange, et al., 2003; Park, 2007).

Figure 1: Karasek's Job Demand-Control Model (adapted from Karasek 1979)



It is argued that the quality of the JDC-S model lies in its integrity, yet on occasions this can be seen as a shortcoming, since the presence of complex working routines is decreased to just a handful of variables (Bakker and Demerouti, 2006). Due to the JDC-S model focussing on extra workload as the main indicator for stress, this straightforwardness gives no equity to reality as revealed by research on WRS (Chapter 3) which has created a far-reaching recognition of the antecedents and mediators of occupational stress, and not simply of work load and stress (Halbesleben and Buckley, 2004). Power control in the workplace is similarly multi-faceted and covers control over requests to undertake extra duties, the nature of the job, implementation and expectations for output, speed of work, the environment, policies and procedures, formal targets and intention to stay in the institution or even quit the job. This raises the question as to whether the JDC-S model is appropriate for use in all work situations.

4.2.2 Effort-Reward Imbalance Model

This model postulates that development of stress-related chronic illness occurs because of the imbalance between greater exertion (job demands) and lesser rewards (salary, personal development and annual leave) (Siegrist, 1996).

The Effort-Reward Imbalance (ERI) model was created by Siegrist and others (Siegrist, and Weber, 1986; Siegrist, 1996) and received recognition in occupational health studies because of its influence on health and well-being (Van Vegchel, et al., 2005). The job-related benefit in the ERI model depends upon an exchangeable link between both effort and reward at the workplace. Effort can be work demand and/or restrictions and rules imposed on staff, for example workload and extra tasks. Rewards represents salary and/or job security, professional development and equal opportunities. The ERI model proposes that work characterized by high effort and less reward (i.e. high cost and low gain) can reflect negatively on employees' emotions and feelings. These feelings can lead to a continuous strain reaction. So, working hard with a lack of appreciation and recognition and not being treated equally are examples of how stress can arise from the imbalance between effort and rewards.

According to this model, stress levels increase because of the inequality between effort and rewards. Social support, appreciation and recognition are considered as rewards that can lead to reductions in stress levels and increased staff retention. The importance of the ERI imbalance model has been assured over a vast range of employment scenarios and has been used in Europe, Japan and USA (Tsutsumi and Kawakami, 2004).

The overriding reason why immigrant nurses travel from their country of origin to work in the KSA is for better salaries and full financial compensation (reward): for example, Filipino and Middle Eastern nurses can gain three times their normal salary by working in the KSA compared to their home country (Otvos 2005). However, in a worldwide context, pay is not the only component to consider, as some immigrant nurses travel for professional development or for the travelling itself, although this is rarely the case in the KSA.

The ERI model puts special emphasis on the essential aspects of social concepts based on the premise that the job role is fundamental in achieving the personal right toward self-needs. The working culture provides an open door to securing individual development, self-respect (e.g., appreciation and recognition), and self-coordination. As indicated by the ERI model, exertion at work is used as a component of social gain that reacts to effort by providing a satisfactory reward (Seigrist, 1986). Rewards are

maintained by and spread across three types of work-related prizes: money, appreciation and status control. Fewer promotion prospects, restricted employment rules and work insecurity are reasons for poor status control. The ERI model has however been criticized for suggesting in its hypothesis that the impact of replacement, appreciation, prizes, and power control are the most important employment factors that can overcome the influence of job demands on stress. Moreover, the model does not take account of employees' personal differences and neglects to consider recognition as one of the most rewarding experiences for the effort made (Griep, et al., 2011).

As previously discussed, staff are frequently expected to accept increased workloads and in so doing, they expect rewards. As argued by Siegrist (2002b), high exertion/ low remuneration conditions are likely to exist when:

- 1- work contracts are not clear and inadequately identified, or employees have no options or decisions in the work place.
- 2- individuals consent to this inequality.
- 3- employees present a specific cognitive and motivational example of coping to demands identified by extra workload-related duties.

Employees facing and practising extra job-related responsibilities can misinterpret the relationship between extra workload and their own specific ability to cope with it. They think little of the extra load and have an unrealistic estimation of their own responsibility in contributing to the inequality between extra load and rewards (Siegrist, 2002b).

In a study conducted in Germany, Bakker, et al. (2000) investigated the imbalance between greater work demand and fewer rewards associated with increased turnover and the toll on employees' emotional resources among 204 nurses. The results showed that nurses who are facing an effort-reward imbalance are exposed to higher stress levels and have increased intentions to leave their employment. In a more recent study, Kikuchi, et al. (2013) recruited nurses in a Japanese hospital to investigate the effect of ERI on quality of life. The four effort-reward domains (physical health, psychological, social relationships and environmental) and extra commitment scores were specifically linked with quality of life within the four domains.

In summary, this model was not chosen for the purposes of this study as it focusses on social concept and support domains and does not involve personal differences between employees or acknowledge 'recognition' as one of the most rewarding experiences for the effort made.

4.2.3 Cooper and Baglioni Model

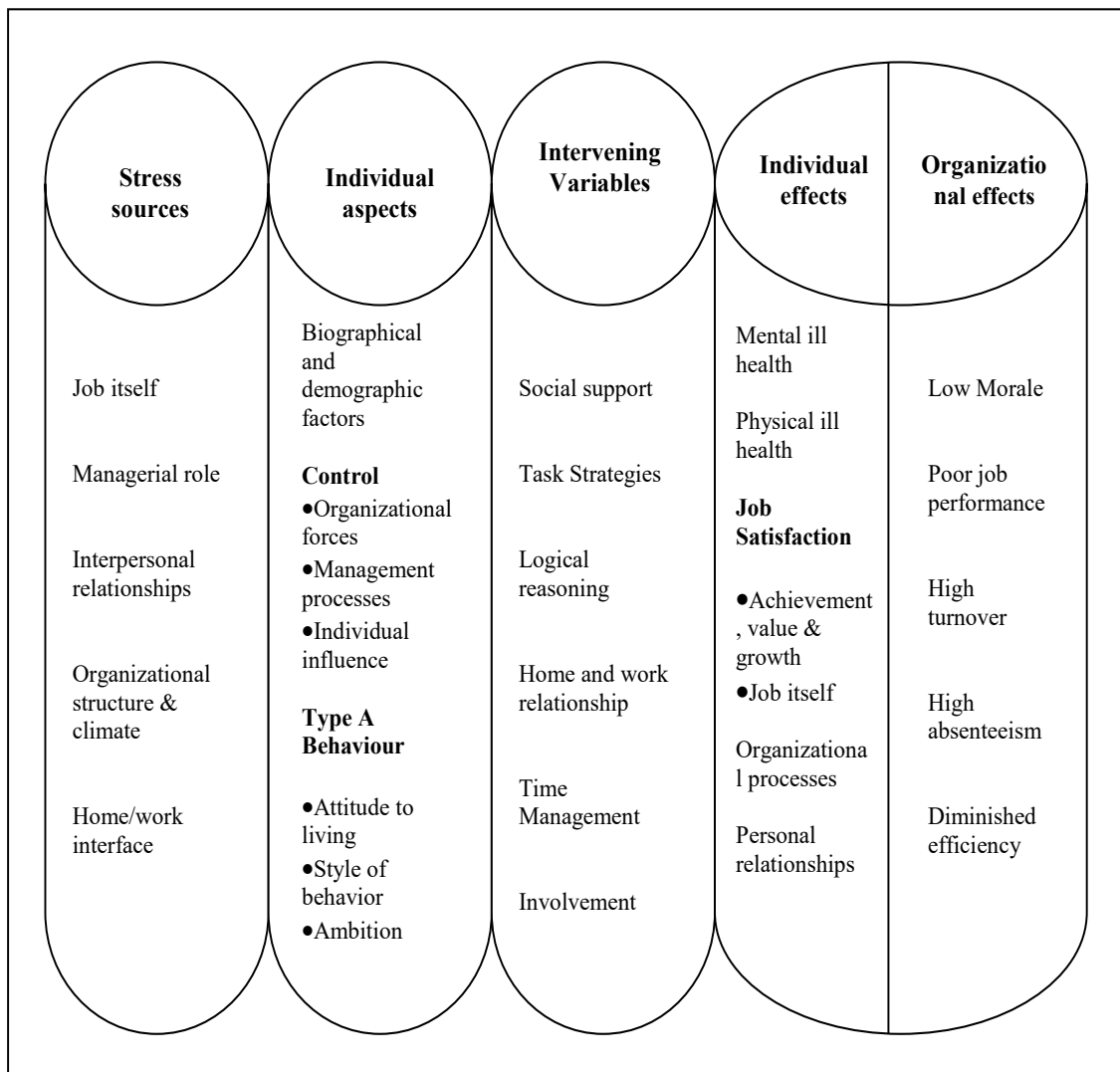
Cooper and Baglioni's (1988) model is based on a model of stress which links a variety of stress sources, person and organisational effects (responses) with coping strategies and skills (moderators) which involve personality factors, coping strategies and perceptions of control (Figure 2).

The model has been used in many nursing research studies that have sought to measure work related stress, job satisfaction, performance, and turnover (e.g. Thong and Yap, 2000; AbuAlRub, 2008; Richard and Gosselin, 2010). Job satisfaction is perceived to be the result of three factors working together: skills, effort, and the nature of the working environment. Skills could involve the knowledge and competencies necessary for the employee to meet the requirements of the job. Effort is the degree of motivation that staff members have in order to get the job done and the nature of the working conditions is the degree of accommodation of these conditions in facilitating staff members' productivity and outcomes (De Cassia Fogaca, et al., 2010). Although Cooper and Baglioni's model has been used by many researchers, it has also been subject to criticism for attempting to measure too many aspects at the same time (John and Bright, 2001).

Figure 2: Proposed Cooper and Baglioni (1988) model of the link between stressors, moderators and outcomes

coping

strategies



Cooper and Baglioni's model (1988) is best described as an interactional framework. It depicts the potential link between the sources of work related stress (Figure 2) and individual and organisational effects by way of intervening variables that mediate between the individual and organisational differences and so may moderate the stimulus-response relationship.

This model can affect both individuals and organisations and treats the intervening variables as moderators. According to this model, the sources of stress can include the job itself, managerial duties, interpersonal relationships, career and achievements, organisational structures and the working environment, with attention being paid to the home-work interface. The individual aspects of sources of stress are biographical and demographic factors, organisational factors, management processes, individual

influences, attitude to living, styles of behaviour and ambitions. The intervening variables that moderate the stimulus-response relationship as shown in Figure 2 are social support, task strategies, logical reasoning, home and work relationships (conflicts), time management and involvement.

The potential individual effects of work-related stress identified by Cooper and Baglioni (1988) are mental health issues, physical ill health, achievement and outcome, value and development, and the job itself (organizational processes and personal relationship). The organisational effects of work-related stress are characterised as low morale, poor job-related outcomes, high turnover of staff (burnout and intention to leave), high levels of sickness amongst staff (absenteeism) and diminished efficiency.

The focus of this model on intervening variables, including between sources of job stress and subsequent job satisfaction makes it relevant to the present study but by being very broad with too many aspects at the same time (John and Bright, 2001) makes it complex and, according to those authors it may be most useful to identify problem areas in organisations that can then be examined and explored deeper using more focused approaches.

4.2.4. Job Demands-Resources Model of Stress

The Job Demands-Resources (JD-R) model has been used in many nursing studies such as those by AbuAlRub, et al. (2009), Cortese, et al. (2010) and Curriem, et al. (2012). It has been defined as “*a theoretical framework that tries to integrate two fairly independent research traditions: the stress research tradition and the motivation research tradition*” (Demerouti, et al., 2001) and was developed with a view to drawing upon the specific strengths of existing models in particular the JDC-S and ERI models (sections 4.2.1, 4.2.2). According to the JD-R model, every occupation has its own risk factors for work related stress, which can be classified into two groups: ‘demands’ and ‘resources’ (Bakker and Demerouti, 2007; Bakker, et al., 2003a; Bakker, et al., 2003b; Demerouti, et al., 2001). Job demands can be physical for example lifting/turning patients or heavy boxes; social for example interpersonal conflict; or organisational for example job security. Job resources relate to those factors that enable meeting job demands, for example social or organisational aspects of the job. Examples of job resources include appreciation and recognition, social support, high salaries, job control, or participation in decision-making (Bakker and Demerouti, 2007). The JD-R model proposes that when job demands are high, additional effort and resources must be applied to achieve the work goals and to prevent decreasing performance. An increase in workload can cause

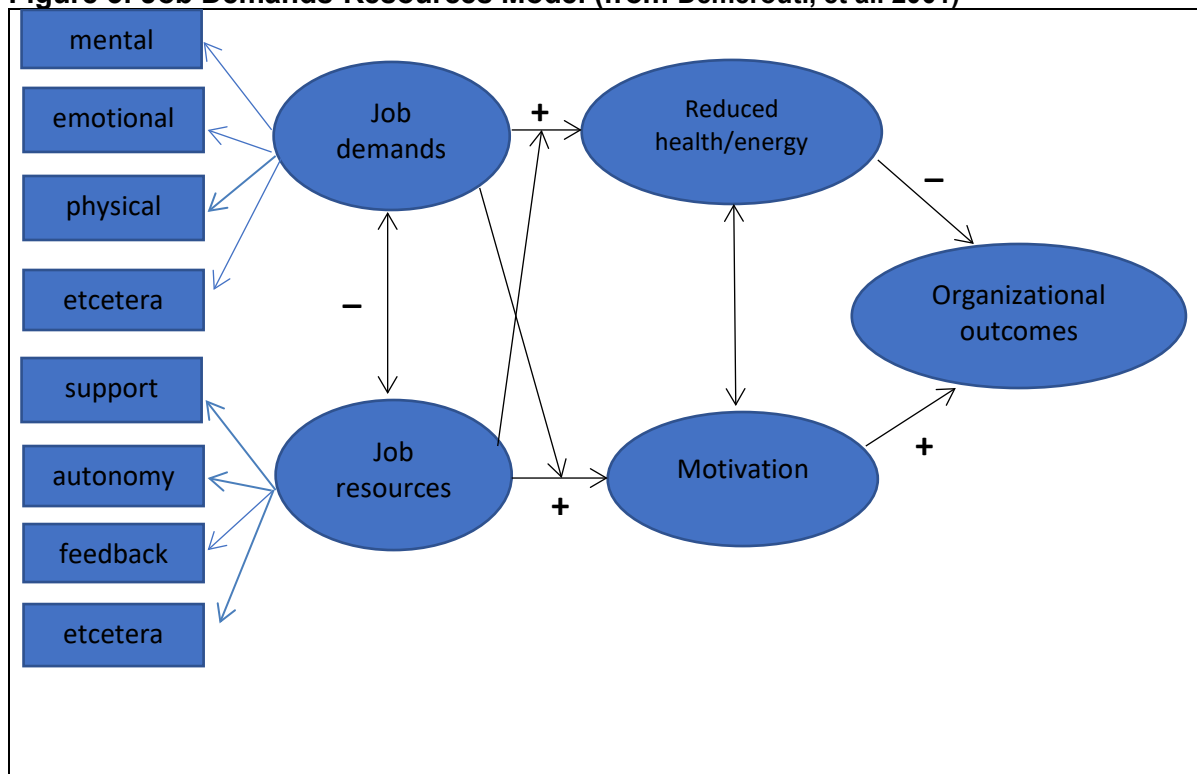
fatigue, irritability and exhaustion and, if combined with inadequate job resources, can lead to withdrawal and lack of motivation. Lack of motivation is one of the components of burnout and a cause of staff turnover (Bakker, et al., 2003).

The job demands in this model are considered to initiate adverse health processes while job resources initiate motivational processes. In addition, this model determines how demands and resources interact to produce vital organisational results. It is a balance model in that job resources have the potential to buffer the negative aspects of job demands. The JD-R model therefore presents a balance or imbalance in interpreting the world environment (Figure 3).

The JD-R model was first implemented by Demerouti, et al. (2001) who tested the model's hypothesis at the individual level by utilizing self-reported data and at the job function level by using observer ratings for job demands and job resources and average scores (at the group level) for burnout. The study reported similar relationships at the individual and group levels. Furthermore, individual outcomes on job demands and job resources, as well as their scores, have been used to predict team level outcomes, including actual staff turnover (Bakker, Van Emmerik and Van Riet, 2008) and daily team financial turnover (Xanthopoulou et al, 2009b).

Regarding the aims of the present study, one of the positive features of the JD-R model is its generalisability and flexibility; the model can be used in a wide variety of situations and applied to any profession. For example, job demands and job satisfaction are negatively correlated involving overlapping sources or antecedents and the JD-R model provides an inclusive analysis of the workplace antecedents accountable for close relations (McVicar, 2016). That review identified the dynamic aspect of stress (and hence satisfaction) by which priority sources change with time (and setting) influenced by contemporary socio-economic factors. Considering evaluation studies between 2008 and 2015 it was suggested that the chronic shortage of nurses and significant psychosocial challenges over preceding years likely influenced what appeared to be problems of interpersonal behaviours between nursing teams or between nurses and others, for example patients and/or relatives, and to managerial support and nurses' decisions as priority issues (McVicar, 2016).

Figure 3: Job Demands-Resources Model (from Demerouti, et al. 2001)



4.3 Applying the Job Demands-Resources Model in Exploring Nurses' Stress and Job Satisfaction in Adult Critical Care Settings in the KSA.

Examining staff stress and job satisfaction has become increasingly important to researchers. This research journey started with the process of selecting a theoretical or conceptual framework for the research to help in understanding and explaining the participants' feelings about these two phenomena (stress and satisfaction). Several nursing, social science, and other disciplines theories were investigated and tested for eligibility as possible theoretical frameworks for this research, but the overriding need was to select a theory that encompassed both stress and satisfaction. Several stress models have been used to explain and explore critical care nurses' experiences. Whilst reviewing the literature, it was found that there are several factors influencing nurses' stress and satisfaction, such as workload, emotional demands, and physical effort, and there are variables influencing nurses' stress and satisfaction, such as level of education, years of experience, gender, and marital status. Therefore, it was reasonable that the selected theory should cover all of these factors and variables. Most of the previous stress theories fail to cover some important factors that were raised in the literature, such as the inverse relationship between perceived job stress and perceived job satisfaction.

The JD-R framework was chosen as being most suitable for this research on account of its adaptability and its utility to explore the psycho-social enquiry about feelings, beliefs, perception, coping, views and practices related to job stress among intensive care nurses in the KSA. It was considered that the use of the Job-Demands-Resources model (Demerouti, et al., 2011) would best reflect the purpose of this study, and due to the fact that an investigation of the stress experienced by intensive care nurses working in the KSA is being examined for the first time in a Saudi context. The aim of this research is to identify work-related stress and job satisfaction levels whilst exploring the main stressors. This reflects the theory underpinning the Job Demands-Resources model, which has been found to be flexible, comprehensive, widespread, applicable and reflective of nurses' stress and dissatisfaction, and which has previously been applied in diverse backgrounds and cultures. The JD-R model underpins the main aim of this study to investigate individually perceived stress among critical care nurses in the KSA. Therefore, in this study, the definition of stress is identifiable within the JD-R model, and will be adopted in order to answer the research aim and objectives. Additionally:

- it acknowledges that there is a critical level, from a motivational perspective, which can become an intermediary for stress; for example Chapters 2 and 3 (literature review) identified that staff appreciation, social support, salary and equity of pay are considered to be major psychosocial risks for intensive care nurses in the KSA.
- it considers how work-related stress can influence the institution.
- it considers both positive and negative outcomes and recognizes that demands and resources in certain situations, such as in the KSA where the culture, traditions, life routine, rules, policies, the nature of the healthcare system and work environment, are unique.
- it has been used to study job stress, burnout, work-family interface and has been used by researchers to develop a clearer understanding of how job resources are linked to performance and outcome (Bakker, et al., 2004).
- the JD-R model is considered suitable for being generalised due to its suitability to fit in different cultural contexts and has been used in different and varied environments involving discrimination, inequality, and employees working in different roles under different cultures with different motivational expectations (Yeung, 2004). This fits very well with the unique work environment encountered within the settings used in the current study.

- it involves all the variables under exploration in this research.

The current research sought to investigate selected concepts that may be derived from the JD-R theory. This research explored stressors, variables to stressors, and how these are perceived by intensive care nurses employed in the KSA. Specifically, joining the JD-R model processes in an additive sense leads to the creation of the proposition that when both job demands and resources are high, it is expected that nurses will experience strain but also raised motivation, while when both are low, a lack of motivation and strain can be expected. Consequently, a high demands-low resources situation should result in high strain and low motivation while a low demands-high resource situation should therefore encourage low strain and high motivation.

4.4 Chapter Summary

This chapter has presented and discussed many theoretical models that can be used to investigate the incidence of job-related stress. The reasons behind choosing the JD-R model for use in the present research have been discussed in detail. By utilizing the JD-R theory, job stress and stressors, job satisfaction and their variables can hopefully be understood. This will assist in both processes of data collection, and data analysis and interpretation to help make the exercise meaningful. Questionnaires and personal, face-to-face, in-depth semi-structured interviews were the main method of data collection for this research. It was essential to find a model or a theory to help in exploring the factors and variables that might affect job stress and satisfaction for adult critical care nurses in the KSA. Therefore, the JD-R Model was selected as the theoretical framework to structure the exploration and explanation of the factors and dimensions surrounding the issue of job stress and satisfaction.

This chapter has provided the theoretical framework for the study, while the following chapter explores the methodology and methods applied to gain the information needed to answer the research questions and objectives

CHAPTER FIVE

Methodology and Methods

5.1 Introduction

This chapter presents and discusses the aim and objectives of the study, the methodological perspective and the methods employed and their appropriateness for this research. This is a very important chapter as the methodology provides the philosophical underpinning for the research, linking theory to the research questions and methods. This is followed by the methods applied, which refers to the way in which I carried out the research. This chapter will provide information regarding two key aspects of the study, namely, how the data were collected and how it was analysed.

5.2 The Aim and Significance of the Research

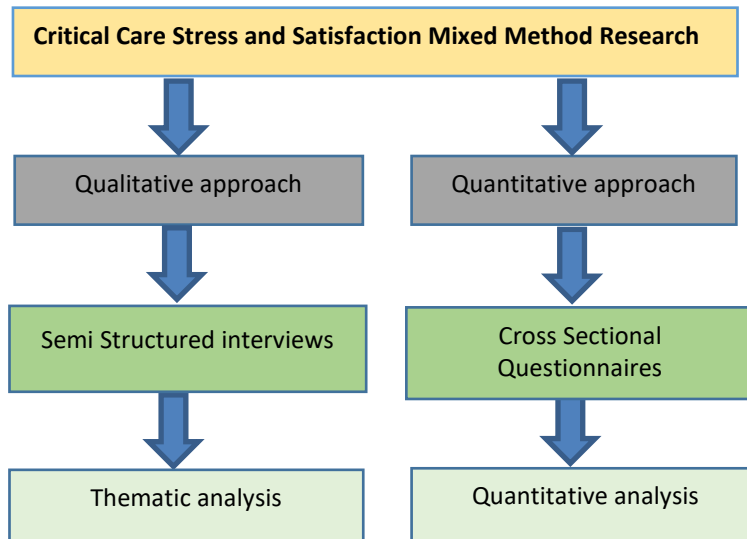
The aim of this study is to describe the job stress and satisfaction experienced by intensive care nurses in major teaching hospitals in the KSA, seeking answers to the following research questions: (1) what is the overall level of intensive care nurses' job stress? (2) What is the overall level of intensive care nurses' job satisfaction? (3) What are the factors (stressors) that influence intensive care nurses' job stress and satisfaction?

The focus of this chapter is to present the research methodology and methods so as to emphasise their appropriateness for the research. To answer the research questions a mixed methodological approach (using quantitative and qualitative methodologies) was employed. I chose a mixed methodological approach because of its potential to provide a richness of data around the phenomenon being studied. i.e. the identification and deeper exploration of the scale and sources of job stress and satisfaction amongst intensive care nurses in the KSA. In particular (see Figure 4) it combined quantitative surveys, which are a conventional psychological evaluation protocol widely applied in stress evaluations, with qualitative interviews appropriate to explore the more subjective aspects of nurses' perceptions of stress and the work environment.

This chapter begins with an overview of the mixed methodological approach, explaining why it was chosen for this study. This is followed by the methods used, starting with the quantitative approach and including the sampling and recruitment processes and data collection methods. The qualitative methods follow, including the sampling and recruitment strategies, data collection and the analysis process. Ethical considerations and quality will be presented. Finally, a summary will be provided. In this particular

chapter, I will write using first person, which I feel is important because it shows my part in the research processes.

Figure 4: overview of the Data Collection Approach



I will discuss philosophical assumptions that have their definitions in the social sciences and present the methodological approach and the justifications for its use. A quantitative approach was used in the first stage of the study and included the collection of demographic data and the application of the Critical Care Nursing Stress Scale (CCNSS) and the McCloskey/Mueller Satisfaction Scale (MMSS).

The qualitative methods I used in the second stage involved semi-structured interviews to explore participants' points of view about stress and satisfaction in the selected work settings. The qualitative data enabled further exploration of the quantitative data. The chapter begins by addressing the philosophical paradigms employed and is followed by a section on the underpinning philosophy of the study, along with an overview of the mixed-methodology approach.

5.3 The Philosophical Paradigms

The research paradigm that underpins a study is in part based on the beliefs, thoughts and previous experiences of the researcher and through a consideration of an

appropriate approach by which to obtain the information required to answer the research questions. Three main research approaches have been used by social and behavioural sciences researchers: Quantitative-oriented, qualitative-oriented and mixed approaches (Teddlie and Tashakkori, 2009). The research question and the aim of the research determine whether one should apply a qualitative, quantitative, or mixed methodology. For the current research, both quantitative and qualitative approaches were used, making it a mixed methodology. The use of a mixed approach allows the researcher to be more confident of a result if it comes from a convergence of both approaches, as well as allowing the researcher to improve the accuracy of judgment about a phenomenon through the collection of different kinds of information, confirming the credibility and validity of research results obtained from different approaches and different information (Dunning, et al., 2008).

In order to conduct and/or evaluate the philosophy underpinning any research it is important to understand the assumptions and terminologies which inform them. Absence of clarity regarding the philosophical assumptions underpinning any research study makes it hard for the reader to gain a sense of how the data has been generated, evaluated and used in the research (Lopez and Willis, 2004). In critically discussing any philosophical assumptions within the social sciences, three concepts are routinely applied: Ontology, Epistemology and Methodology. Ontology refers to the assumptions made in relation to the nature of reality (Guba and Lincoln, 1994). Epistemology refers to the information that can be obtained from reality, it identifies the nature of knowing and the construction of knowledge (Benton and Craib, 2010). Methodology refers to the process of research whilst method refers to how the researcher plans and carries out the process of research (Creswell, 2015). In this chapter, I will explore each of these concepts with reference to the research presented in this thesis.

Quantitative research is often referred to as a methodology for the conduct of social study, although it lends itself more readily to objective study of natural and biological sciences. Quantitative researchers most often align themselves with the positivist/post-positivist paradigms (Leech, et al., 2010). Such approaches can include the statistical analysis of procedure outcomes, biological outcomes, biological markers, or in the case of social sciences, questionnaires that deliver quantifiable data (Risjord, et al., 2000). Positivist (i.e quantitative) approaches are particularly concerned with the experiences of subjects and variables relating to cause and effect, and variables that are correlative (Frankfort-Nachmias and Nachmias, 2008). Positivism holds that external reality exists independently of human perception, and observers (researchers) must be as objective as possible in observing the phenomena associated with the research subjects. This is routine in natural sciences but becomes more difficult to realise in social sciences when

reality may be represented by human constructs. Such an approach therefore can be applied to to identify relationships that can be tested and replicated universally in similar conditions, which is the fundamental aim of empiricism (Benton and Craib, 2010).

Qualitative research discusses and explores phenomena that are difficult to quantify numerically and qualitative researchers align themselves mainly with the interpretivist or pragmatist paradigms, the main interest of which is the interpretation of the narratives inherent in qualitative data (Leech, et al., 2010). However, qualitative research relating to healthcare studies has been criticised for the misleading separation of method from theory and of technique from the conceptual underpinnings of clinical practice (Lambert and McKevitt, 2002). Qualitative health researchers have countered that by arguing that the choice of research method and how it is applied can be matched to what is being examined rather than to the methodological leanings of the researcher (Holloway and Wheeler, 2015).

A qualitative approach to research differs from a quantitative approach in several ways, but in terms of social sciences the most significant difference is that qualitative researchers are obliged to see the social world from the perspective of the subject, as it holds that the nature of reality is constructed by human perception (Holloway and Wheeler, 2015). Several authors have reported that qualitative approaches are the most useful for any research which is concerned with human perceptions and the ethical/non-material elements of human activities and behaviour (e.g. Munhall, 2007b; Streubert, 2007).

Qualitative methods are useful for the exploration of complex issues in human experience that cannot easily be quantified, using subjective approaches to answer the research question(s) (Beedles, 2002). It has become very popular within nursing research because of the creditability it has accrued, and general approval exists for understandings gained from it that explain and support the nature of human beings, allowing a valuable contribution to healthcare literature and nursing practice (Munhall, 2007b). Qualitative research requires the development of an understanding of human experience whereby the person is part of a complete set of experiences and connections engaged with others in a situation within a particular context (Munhall, 2007b).

Mixed-methodology researchers often align themselves with the pragmatist paradigm and are interested in generating and analysing both quantitative and qualitative data (Teddle and Tashakkori, 2009) to study a phenomenon. In this study, my chosen research questions necessitated my using both quantitative and qualitative approaches because this enabled triangulation of the results on various levels, which allowed and informed further in-depth exploration. A mixed approach was selected because it

conferred a strong benefit to the pragmatic aspect of the research, whilst giving consideration to both quantitative and qualitative methods in achieving the aim and objectives of this study. A mixed methodology allowed me as the researcher the option of many different ways of conducting the research, for example in the way that I chose to recruit potential participants and the ways I was able to use different data collection methods: to collect the quantitative data I chose to use questionnaire style surveys but the use of qualitative interviews also allowed me to get beneath the 'surface' of the objectivity of 'tick-box' style data to find out how people felt and thought about the identified issues. The use of mixed methodology allows the researcher to be more confident of results if they emerge simultaneously from the use of different methodologies, thereby confirming credibility and validity (Dunning et al 2008). In addition, Yin (2003) highlighted that using multiple sources of data allows the researcher to consider historical, attitudinal and behavioural problems with a key advantage of 'covering lines of enquiry', whilst Bergman (2008) maintained that the results from one method could be used to assess the accuracy of the results obtained by another method. This might improve our perception of a subject by allowing for the discovery of new or deeper dimensions (DePoy and Gitlin 2015).

Many researchers support the idea of mixing the technical aspects of different approaches without breaking the paradigmatic assumptions inherent to them (Morse and Chung, 2003). It is also reported that mixed approaches do not share the same weaknesses or potential for bias inherent in either of the individual approaches (Creswell, 2015): each has assets and liabilities, although triangulation purports that it exploits and neutralizes the assets rather than amplifies the liabilities (DePoy and Gitlin, 2015). In other words, using a mixed methodology supports the weaknesses of the individual approaches but allows them to complement each other.

5.4 Rationale for Mixed methodology and the Present Study

This research into nurses' work-related stress and job satisfaction stems from epistemological and ontological philosophies which consider human feelings, perceptions and thoughts. The study aims to discover nurses' values, beliefs, perceptions, and understandings of the significant factors which influence the levels of work-related stress and job satisfaction experienced amongst intensive care nurses in the KSA. A mixed approach using mixed information sources and data gathering methods seemed to be more appropriate than either a solely quantitative or qualitative approach to revealing nurses' views, experiences, feelings and beliefs regarding their levels of work-related stress and job satisfaction (Hancock and Algozzine, 2006). Morse

and Chung (2003) argued that the use of mixed methods in a research study is beneficial in that it leads to a more holistic overview by tackling the phenomena from different perspectives. This was supported by other researchers who stated that the difficulty of human experience needs mixed methods to gain a complete view (Fos and Ellefsen, 2002). For this reason, the adoption of a mixed methodology was identified as an appropriate and comprehensive study approach that would strengthen my research results and outcomes.

In the KSA, healthcare institutions rely heavily on expatriate nurses (95%) and staff nurses recruited from countries around the world, with a variety of social, cultural and religious backgrounds (Almutairi, 2015). There are differences in salaries and packages for nurses, based on their social origin and category ('A' for North American, 'B' for Western and South African, 'M' for Middle Eastern and 'D' for Philippines), religion and ethnicity making it a unique working environment for nurses and one that is characterised by increasing levels of dissatisfaction and stress amongst foreign employees (International Labour Office, 2004). The new knowledge generated by this research relates to nurses' views, beliefs and feelings on the topic under examination and an in-depth exploration of the organisational factors that contribute to nurses' levels of work-related stress and job satisfaction. In addition, it provides an understanding of the factors that influence nurses' stress levels.

According to Mazzola, et al. (2011) and as we have seen in the literature review (Chapter 3), most of the research that has been undertaken on work related stress and job satisfaction has used quantitative approaches. This is because results from self-reported questionnaires with quantitative responses might be related through application of inferential statistics. A mixed-methods approach is therefore a suitable starting point from which to undertake research into the phenomenon of nurses' views, experiences, feelings and beliefs regarding work related stress and job satisfaction in the KSA. This is especially so in the case of intensive care nurses working in the unique context of the Saudi culture, which has a mix of Arabic cultures with Islam, very different to that of the Western world and where the large number of immigrant nurses providing care for the indigenous Saudi patients are culturally diverse and different from the patients they are caring for (Irvin, et al., 2010). The mixed methods approach adopted in this research not only identified, but explored the stressors further and highlighted something that had previously been missing. I will discuss the mixed methods approach in greater depth in Section 5.5.

In conclusion, understanding the underpinning philosophy of the research enabled me to choose a research methodology which was most suitable and appropriate for the study

and one that could generate the data needed to achieve the aims and objectives of the thesis. In this study I considered that a mixed-methodology strategy would be more likely to provide a better understanding of the research problems than either of the individual approaches alone would have done, as it attempts to corroborate and complement findings and takes a more balanced approach to the research. In so doing, it counteracts the individual weaknesses associated with either qualitative or quantitative methodologies used in isolation.

5.5 A Mixed-Methods Approach

The underlying philosophy of mixed-methods research is to enhance and stimulate the theoretical view by including alternative ways of understanding and interpreting reality that could be not obtained without using more than one research approach, since both approaches (quantitative and qualitative) represent supplementary components of the research (Polit and Beck, 2012). For the purposes of this study, the method chosen for the qualitative component was the one most commonly used, i.e. the description by nurses in their own words, either in writing or verbally, of their individual work experiences. This is a strategy that has been used successfully by many researchers (e.g. Smith and Smith, 2006; Thelwell, et al., 2007; Younghusband, 2008).

Mixed-methods research is an approach in which the researcher combines and inter-relates quantitative and qualitative approaches, including methods of data collection, analysis and concepts, into one single approach in order to explore sociological explanations (Tashakkori and Teddlie, 2003). Such approaches have been widely applied in social and healthcare research, and in recent years, particularly in studies focusing on nursing (Ulrika, et al., 2010; Teddlie and Tashakkori, 2009; Denscombe, 2008). Mixed-method research is considered by some as the third main research paradigm and can be an attractive alternative to the use of either quantitative or qualitative approaches alone (Creswell, 2015), although when quantitative and qualitative methods are used in the same study, one usually dominates the other (Ulrika, et al., 2010).

According to Johnson, et al. (2007), mixed-method approaches can be classified in three ways. The first classification is of pure mixed-methods research in which both qualitative and quantitative methods are equally important in achieving the aims of the study. The second classification refers to mixed methods research studies in which qualitative methods dominate and which depend mainly on qualitative data whilst at the same time recognizing the significance of the quantitative data in exploring the issue under

investigation (Johnson, et al., 2007). The third classification refers to mixed methods research studies in which quantitative methods dominate and which depend on quantitative data whilst recognizing the importance of qualitative data in achieving the research aims. This study used the pure mixed-method research approach, as both quantitative and qualitative data were equally vital in order to achieve the aims of this study. In this research, the quantitative data was collected to provide an objective description of stress and stressors and to identify their relationship with the levels of job satisfaction that critical care nurses face in the KSA. The qualitative data enabled the exploration of the context and the causes of stress and stressors through analysis of the nurses' perceptions and points of view. Together, these qualitative and quantitative approaches were combined to provide a more detailed explanation of the phenomena being studied.

Sandelowski (2013) describes three aims of using a mixed-methods research approach:

- A- Triangulating, where the researchers are looking for corroboration or correspondence and the results of each of the various methods guarantee an approximate validation.
- B- Supplementary, where the researcher seeks to illustrate the results of one approach with the results of the other (Teddle and Tashakkori, 2009).
- C- Development, in which the researcher seeks to use the results of one approach in order to develop the other approach, where development might involve sampling, implementation and measurement decisions (Dunning, et al., 2008).

Teddle and Tashakkori (2009) argue that mixed-method approaches tend to fall into one of two study designs. The first is the parallel mixed methods design where the researcher uses the qualitative and quantitative data in parallel, either at the same time or at various times, and in which data collection for both approaches is conducted individually and the data are then compared during the analytical or interpretive stages of the study. This approach helps the researcher to build a more comprehensive understanding of the research results, compensating for the weaknesses of one approach with the strengths of the other. The second is the sequential mixed-method design, where the qualitative and quantitative approaches occur in sequence (data collection and analysis) with one approach following the other (Teddle and Tashakkori, 2009). This approach allows the researcher to change the research question in the second stage if necessary (Creswell, 2015). The second stage can further inform the data collected in the first stage.

Morse (1991) developed a classification for mixed-methods research that illustrates the sequence in which the approaches are carried out, the dominant approach taken, and the stages of the research in which the data is combined. The dominant approach is shown in upper case and the additional method is shown in lower case. 'QUAN' or 'quan' represents 'quantitative' whereas 'QUAL' or 'qual' represents 'qualitative'. The plus sign (+) indicates that the methods are used simultaneously (in parallel) and an arrow (→) indicates that the methods are used sequentially and its direction refers to the order in which the methods are used. Each approach can underpin a research project in four possible combinations. These are listed below (Morse, 1991):

Quantitative-based:

- QUAN + quan (different quantitative methods are used simultaneously; one forms the basis of the study and is clarified by using the other).
- QUAN + qual (quantitative and qualitative methods are used simultaneously with a constructive theoretical drive and the quantitative methods forming the basis of the study).

Qualitative-based:

- QUAL + qual (different qualitative methods are used simultaneously; one forms the basis of the study and is clarified by using the other).
- QUAL + quan (qualitative and quantitative methods are used simultaneously with an inductive theoretical drive and the qualitative methods forming the basis of the study).

The research aim(s), objective(s) and question(s) are considered the main factors in determining the most appropriate combination of approaches and methods. For the purpose of this research, I adopted the development mixed method research in which quantitative findings developed the tool for the qualitative stage and they combined during analysis. The aim of using this design was to obtain complementary information related to the same topic of job stress and satisfaction and merge the results from each design.

The main advantage of a mixed-methods approach is that the findings of both approaches are integrated at some point and complement each other in the study. Integration might take place during the data collection stage, during the analytical stage, or during the interpretation stage of the research (Ulrika, et al., 2010). Quantitative and qualitative approaches and methods can be integrated to the point that these components are straightforwardly linked to one another within one study and in such a

way as to be reciprocally instructive, where the study is likely to produce better findings than the individual components alone could do (Woolley, 2009). For example, a quantitative approach might be considered the most appropriate way in which to examine and measure work related stress and to identify the most influential stressors for critical care nurses in the KSA. Alternatively, a qualitative approach is considered a good way in which to conduct a deep exploration of the nurses' own experiences in order to understand better work-related stress and the sources of it (Leech, et al., 2010).

The primary drawback of using a mixed-methods approach pertains to the effort and time needed to conduct such research. Weaknesses of mixed-methods studies were reported by Creswell (2003) as being the skills and knowledge required of the researcher to conduct a mixed-method study, reviewers and audiences who may not be sufficiently expert to comprehend and appreciate a mixed methods study, the effort and timing required for data collection, and the necessary resources and facilities required. To overcome these challenges and threats, I sought assistance in the preparation of my mixed-methods research study from the Anglia Ruskin University coursework, my supervisors and external sources. Details of sample, recruitment, data collection methods, and analysis now follow. As a sequential mixed-method approach was employed and information was collected in separate stages starting with quantitative stage in this research, integration of mixed-method approaches ultimately will be combined in a discussion stage in the study (Tashakkori and Teddlie, 2010).

5.6 Research Methods

Research plan

The nature of methods used must be related to the nature of the research and the questions they are aiming to explore and answer. In this research, the assumption of a mixed-methods approach was met: firstly, in its suitability to study a complex phenomenon in real life context- i.e. the effect of job stress and satisfaction on intensive care nurses within the KSA, and secondly, because job stress is highly contextualised and cannot be separated from its context. It therefore benefits from mixed methods of data collection in order to fully explain it from different perspectives.

Formatting and identifying the research questions is considered the most important part of research (Yin, 2009) as the study questions guide the research process and provide ideas to identify the most suitable methods to be applied. It was identified that the overarching aim of this research was to (a) measure and explore the perceived stress

and job satisfaction amongst intensive care nurses in the KSA, whilst (b) a broader objective of the study was to increase the awareness of job stress and satisfaction in clinical area. Details of the study aims were identified in Chapter One and at the start of this chapter. Quantifying the level of perceived stress and satisfaction requires application of questionnaires that provide rating measures according to strength of view/opinion; in this study (see below for details) the Critical Care Nursing Stress Scale was selected as most appropriate to evaluate job stress, and the McCloskey/Mueller Satisfaction Scale as a widely-recognised tool to evaluate job satisfaction. Understanding further the awareness and views of nurses of job stress and satisfaction required a qualitative approach, in this study through one-one interviews

Chapters 2 and 3 also acknowledged that participant demographics can influence the stress reactivity or coping capacity of individuals in the workplace and so it was important to incorporate those data into this study. My chosen demographic variables, based on the literature, were age, gender, years of nursing experience, marital status, education level, years of service in the KSA and nationality. Unfortunately, the research committee at one of the hospitals requested that nationality should not be disclosed in the questionnaires. After discussing this with the relevant ethics committee and explaining how important it was for the validity of my research to include the participants' nationality, the research committee agreed to compromise and permit me to include the social origin category (A, B M or D - as detailed in section 5.4) instead. The chosen extra demographic variables were contract type, patient:nurse ratio cared for per shift, and staff title. Gender is a very important consideration when researching intensive care nurses in the KSA because the KSA is male dominated, but most of the nurses are female. The selected scales also included measures of salary and contract benefits (e.g. flexible working, vacation leave) which vary according to nationality, experience and academic education. Contracts for staff nurses and charge nurses are single contract without family. Many married female nurses come to the KSA for work to support their families back home, however a lot end up quitting because of their family situations such as young children, or the death of the main caregiver (Mitchel 2009).

5.6.1 Research Population and Research Setting

A population is defined as the total number of individuals from whom data can potentially be gathered (Bryman 2004). The "study population", however, refers to the target participants from whom data can hopefully be gathered and collected after defining the inclusion and exclusion criteria (Polit and Beck 2004). Research aims to uncover new facts about a large group of the population by making inferences from a smaller group of the population, and therefore choosing the study sample is considered a prerequisite of questionnaire design (Onwuegbuzie, 2013). The sample frame is a listing of all the

variables in the sample from which the study's sample is taken (Borg and Gall, 1989, Gorard, 2010). Awda Malkawi (1992) highlighted that the research issue and the aim of the study should determine the nature of the sample, but other researchers argue that that the most important criteria in choosing the study's sample is selecting participants who can provide the needed data for the research (Borg, 1981; Borg and Gall, 1989).

The population for this research is all the intensive care nurses who were in the two chosen hospitals (Hospital A & Hospital B) At the time of the research there were a total of approximately 1600 nurses working in the two hospitals' critical care settings. Of these, 1200 staff nurses met the inclusion criteria (see section 5.6.2.1) and were therefore eligible to participate in the study, and this determined the study population. Because the aim of the study was to investigate job stress and satisfaction amongst intensive care nurses, intensive care nurses were deemed to be the most suitable people to give responses to the questionnaire and to interview. In addition, it is worth listing the reasons behind selecting the KSA as the place in which to conduct this study.

- The KSA is where the researcher worked as an intensive care nurse; this enabled me to collect the required data for this study without any problems imposed by cultural diversity, language or the Saudi context, including ethical issues regarding conducting this research.
- The KSA recruits many nurses, including intensive care nurses, from almost 40 different nationalities which enriches the data obtained in this research.
- I as a researcher worked as an intensive care manager and I am from the same religion and speak same language as the ethnic KSA population which helped me to understand the context, culture and healthcare system.

The two hospitals where this research took place have a recruitment policy whereby all nurses hired in nursing services will be assigned to the entry level of staff nurse III (i.e. staff nurse III, healthcare assistant III, charge nurse III). After two years they will be promoted to level II and after two years of holding level II, they will be promoted to level I. However, there have always been concerns that nurses are appointed on the same entry level regardless of their number of years of experience or their academic qualifications; so whether a nurse has ten years of post-graduate experience or just two years, they would still be appointed to the same entry level.

Most of the hospitals in the KSA recruit from over 40 nationalities (Mitchel, 2009). The diversity in nursing nationalities makes credentialing a hard task for nursing managers. To provide safe, high quality care, it is imperative that such a diverse workforce is

qualified and competent in its practice. All the nurses employed from all over the world must meet the criteria imposed by the Human Resources Department and pass a full medical examination and tests.

5.6.2 Stage 1: Quantitative Methods

Quantitative approaches to research were developed in the natural sciences to investigate both social and natural phenomena (McPherson and Leydon, 2002) and to describe, compare and attribute participants' opinions (Burns and Grove, 2001). Quantitative approaches are the most commonly used approaches in medical research while qualitative methods are the most commonly used in nursing research (Burns and Grove, 2001). Quantitative approaches measure the variables' correlations, relative frequencies, or differences between means in a specific population sample. A quantitative approach was used in the first stage of this research because it is essential to explore the link between variables related to health promotion.

However, quantitative approaches to research are less adept at gaining in-depth understandings or exploring the details of any specific 'fact' (McPherson and Leydon, 2002). For example, quantitative research might successfully determine the correlation between people's understandings of health and their cultural beliefs, but it would not enable a researcher to explore why such links exist. In quantitative research, the researcher tries to fragment the phenomena into measurable categories that can be applied across the subject area (Winter, 2000) and so validity and reliability are strengthened. Reliability refers to the potential for the study results to be replicated by a different researcher using the same methodology and methods. This is the concept of repeatability. Validity determines that the research measures what it is supposed to measure, as well as the truthfulness of the research results (Winter, 2000). The validity and reliability of the instruments used in this research will be discussed in the following chapter.

Burns and Grove (2005) listed four measurement strategies for gathering data within a quantitative approach to research: questionnaires, structured interviews, observations and physiological measurements. Questionnaires are the most effective and commonly used data collection strategy when information is required that concerns people's beliefs and behaviours (Thomas et al, 2007). This is largely due to the anonymity and confidentiality that questionnaires afford (Polit and Beck, 2004). Questionnaires can also be used to identify the relationship between variables, they afford the ability to collect a large amount of responses over a short period of time and they can be administered directly to the target population. In this study, existing validated and reliable questionnaires were used that were considered appropriate for the conceptual definition

of the variables under investigation. There is no doubt that questionnaires are vital in obtaining standardised information about the phenomena under investigation in order to determine, compare and estimate their prevalence. Burns and Grove (2005) recommended that inexperienced researchers use existing questionnaires in collecting data in order to save time and increase the effectiveness of their research. However, even though questionnaires are considered to be valuable in collecting a large quantity of descriptive and factual data, they do not always provide explanations as to why specific responses are given (Polit and Beck, 2004). Thus, in this mixed methods research, validated tools were used to examine the ICU nurses' perception of job stress and satisfaction at the two selected hospitals in KSA but followed by interviews for that extra depth. These tools are discussed in further detail below in relation to content reliability and validity.

5.6.2.1 Stage 1: Population and Sample

After checking the inclusion and exclusion criteria for participants (see pages 23 &25), 1200 intensive care nurses from the two chosen hospitals were eligible to be involved in the research. As an overview of the sample population, 57% were from Hospital A and 43% were from Hospital B. According to Polit and Beck (2004), the sample is a subset of the population elements about which data is gathered. Bryman (2004) highlighted that the study sample must be representative of the population in order to make the results from the study generalizable to another similar population. In addition, Bryman made another vital point about representativeness by highlighting that biases (conscious and unconscious) can happen when the study sample does not represent the whole population from which it has been drawn. However, selecting an unbiased sample is not easy; problems can arise with over-representation of some segments of the population (Polit, et al., 2004). As samples are not always representative, researchers usually work in conditions in which errors are possible and even inevitable, but it is their job to minimise such errors by considering some of the issues to increase the representativeness of the study sample as far as possible by using a sampling method that ensures that bias will be avoided so that generalizations can be made about the results (Panacek and Thompson, 2007; Bryman, 2004). Ideal sampling methods will enable the investigator to select a small number of individuals from a large population to keep the cost of the study in relation to time and money to its lowest, without forfeiting the possibility of generalizability (Hofman and Patel 2015).

There are two main types of sampling strategy: probability and non-probability (Bernard, 2011). Probability sampling includes some form of random selection in choosing the participants. Greater confidence can be placed in the representativeness of probability

samples, as this involves a selection process in which each element of the population has an equal and independent chance of being selected. The four main methods of probability sampling are: 1) simple random; 2) stratified random; 3) cluster; and 4) systematic (Bernard, 2000).

In non-probability sampling, participants are selected by non-random methods. Although this type of sampling is less likely to produce representative and meaningful samples, researchers can and do use it, especially but not exclusively in qualitative designs (Burn and Grove 2003). Non-probability sampling can be used in circumstances that do not allow the types of probability sampling strategies that are used in large scale questionnaires (Babbie and Mouton, 2001) There are three main methods of non-probability sampling: 1) convenience; 2) quota; 3) purposive (Bernard, 2000).

Probability sampling in medical and nursing research generally is complicated and difficult because it requires extra time, ethical considerations and more resources and cost than non-random sampling techniques (Hoffmann and Patel, 2015). Therefore, non-probability sampling techniques are more commonly used, especially in clinical nursing research. For the purpose of this study and based on the limited access of the researcher to participants due to the nature of ethical approval, non-probability sampling was used in Stage 1 (quantitative) because it recruits participants who are easy to reach or belong to a group that the researcher is interested in (Bernard, 2011). Non-probability convenience sampling helps in selecting topics that are available without increasing the cost or time that is required to choose a random sample (Hoffmann and Patel, 2015). Using non-probability sampling in this study allowed the researcher to find intensive care nurses who accurately reflected the aims of the research question and fitted the proposed forms of data analysis for this phase. However, as the researcher I avoided making assumptions about the particulars of participant selection and was guided by the study inclusion and exclusion criteria (see below) which were detailed in the questionnaires and in the interview guide: potential participants were asked not to complete the questionnaires if they didn't meet the criteria. Moreover, participants were recruited from the two biggest, but different hospitals in the KSA which recruit nurses from all over the world, and this ensured the diversity of the sample and provided a wide range of potential participants.

Patton (2002) confirmed that choosing a heterogeneous sample helps the researcher to identify and describe the main themes that yield up two kinds of information: high-standards case description that might be helpful in documenting uniqueness and a vital shared pattern of commonalities across the participants. A heterogeneous sample for this research, comprising intensive care nurses of different grades, unit managers,

practice development nurses and mentors in ICU was recruited to gain in-depth information from their clinical experience about the phenomena of job stress and satisfaction. All the participants in the sample had the same independent opportunity to be involved in the study population. "Independent" means that the choosing of one participant does not affect in any way the choosing of another participant (Hoffman and Patel, 2015).

A vital methodological aim for any study is to obtain accurate conclusions about large populations. This is dependent on the representativeness of the sample. A representative sample is one in which the sample's characteristics copy the population from which it comes. Related to the issue of representativeness is how the level of representativeness is presented. In this research, the methods by which participants were selected was of primary importance to obtaining and implementing representativeness.

In selecting the participants for Stage 1 in this research, the following inclusion criteria were used to satisfy the needs of the research:

- a. Participants should be expatriate registered nurses (be registered with the Saudi Commission) and have worked for at least 2 years after qualifying.
- b. Participants should be employed by Hospital A or B, either in the hospitals themselves or on their teaching campuses for at least 6 months.
- c. Participants should have been working in ICU delivering either Level 2 or Level 3 adult intensive care for at least three months.
- d. Any nurses with less than two years' experience since completing their nursing programme were excluded, as were any nurses who had been working in the KSA for less than six months.

The rationale for this was that nurses who been working in the KSA for less than 6 months would only recently have finished their three month's supervision period and would still be under the probationary period required to complete all the necessary competencies and would therefore not have been effectively involved in patient care. These criteria were necessary to ensure that the participants were well-oriented with the system, had overcome the initial stress of working in a new setting, and had worked in similar conditions. The inclusion and exclusion criteria for the second stage were the same as the criteria for the first stage, but nurses were required to have enrolled and participated in Stage 1 data collection first before taking part in Stage 2.

For the quantitative component of this study, the aim was to describe the perceptions of intensive care nurses whilst also conducting inferential testing for relationships between differences. Performing sample size calculations therefore was an important aspect of the research because according to Polit and Beck (2004), if the sample size is too small, the research will lack the precision to provide reliable answers to the questions it is investigating. Tabachnick and Fidell (2007) recommended determining an appropriate sample size in order to achieve a margin of error less than 2.5% with 95% confidence intervals above 90%. However, it is argued that the general rule of choosing the right size of the sample is to recruit the largest possible sample. Gorard (2001) and Balnaves and Caputi (2001) state that the size of the sample should be large enough to meet the needs of the research so that the researcher can, to some extent, be confident enough to generalize the findings in research as much as possible. Cohen, et al. (2000) reported that choosing the sample size relies on the heterogeneity of the population being investigated; the greater the heterogeneity, the bigger the sample that needs to be selected. Cohen, et al. also stated that other factors affecting sample size are the nature of the population and the aim of the study; otherwise there is no clear-cut answer. They also suggested that a sample size of 30 ought to be the base if a researcher wants to utilize factual examination.

Appropriate power analysis for the quantitative phase of this study was calculated by a professional bio-statistician according to the number of prospective variables required to complete the study, rather than the recruited number of participants in the study. For the quantitative approach, the standard power of this study was calculated as 0.9 (90%), effect size as 0.5 and alpha as 0.05, and identified a minimum of 400 participants was required for the study for it to be considered reliable and to achieve more credible statistically significant findings, avoiding Type 1 error (statistical significance but flawed and hence unreliable). The reason for selecting a large sample in this study was to obtain an adequate response rate and to maximize the representativeness in the sample.

Purposive rather than random sampling was used in the quantitative stage as this was acknowledged to be more appropriate (Wood and Brik, 1998). The sample was picked purposively as all participants were identified as intensive care nurses at Hospital A and Hospital B (de Vos, et al., 2002) in other words from different specialities within critical care. This confirmed that despite the sample being to a degree constrained with regard to generalization to the wider research population, the examples and similitude between the experiences of participants would be credible through situational examination of ICU nurses drawn from the entire local (study) population across two large hospitals in KSA.

To explore work related stress and its relationship to job satisfaction; a non-experimental design was used for the quantitative research. There were many reasons for this. Firstly, non-experimental research is used because it is a process of systemic, empirical enquiry in which there is no direct control or manipulation by the researcher of independent variables; this study is non-interventional. Secondly, a non-experimental design is recommended by Polit, et al. (2001) as the most appropriate method for studies focusing on nursing staff. This is for many reasons, the most important of which is the ethical consideration of human variables that cannot easily be manipulated due to the obligation of researchers to prevent harm to their participants. Thirdly, non-experimental research is more practical given a range of logistical research constraints such as time, personnel and the type of participants. Lastly, the design choice means that quantitative researchers do not interfere with the natural behaviour of the participants being studied.

According to Kerlinger and Lee (2000), there are several weaknesses in non-experimental designs, including the inability to manipulate the independent variables, the absence of power to randomise, and the possibility of inappropriate interpretation. Despite these weaknesses, non-experimental designs are widely used in psychology, sociology and education research, and particularly as a method to investigating social phenomena (Benton and Craib, 2010) as in the present study.

For the purpose of this study, I applied descriptive and inferential approaches to research, firstly to provide an accurate description or account of the characteristics of individuals, conditions or groups with the aim of exploring meanings, describing what exists, identifying the frequency with which something happens and categorising information (Burns and Grove, 2001). As descriptive research can explore and describe the phenomenon of work-related stress amongst critical care nurses in real-life situations, this approach can be used to generate new knowledge and explore concepts that have hitherto been the subject of limited or no research, such as nursing stress in the KSA. This enables a richer description of the concept and the ability to identify relationships in order to provide a basis for further quantitative research and theory testing (Burns and Grove, 2011). The inferential approach applied correlational analysis. Correlational research allows the researcher to examine the relationship between two or more variables and it can determine the degree and type of relationship between them. According to Burns and Grove (2001), the main intention of correlational research is to identify and explore the nature of these relationships rather than to identify cause and effect. On the other hand, correlational research can be used to explore the questions that cannot be examined using experimental procedures. Moreover, it can determine the relationships among variables (Siddharth, 2011). In this study I used the correlational

approach to explore the relationship between the variables of demographics, job stress and job satisfaction.

5.6.2.2 Stage 1 (quantitative): Recruitment Strategy

As the researcher, in the interests of ethical transparency, I had help to access, contact and recruit would-be participants. A meeting was held between the researcher and the Directors of the research departments in the two hospitals, in the presence of the clinical supervisor, to explain the objectives and purpose of the research and the process of data collection. Approval was given to access and contact the units and approach participants in the two hospitals. Other meetings with the units' managers were conducted to effectively utilise the time of the nurses during data collection and avoid any issues or problems that might have compromised patient safety and provision of care. I conducted one presentation in each hospital for the intensive care nurses, managers, and practice educators, to encourage participation in the study by explaining the purpose, significance and importance of the research for intensive care nurses, especially those planning to come to the KSA as immigrants. The process of data collection was also explained. The duration of each presentation was 45 minutes and the audience was given the opportunity to ask questions about the study and data collection. They admitted the need for and significance of the study and showed their keenness to participate and support the research. I then obtained a list of nurses working across the two hospitals.

5.6.2.3 Stage 1 (quantitative): Data Collection Instruments

To address the aim of the study, two questionnaires were used in Stage 1, plus an additional questionnaire to collect demographic data from the study participants. Demographic variables included: age, gender, marital status, cultural origin, shift patterns, years of experience and experience in the KSA.

One of the most likely sources of bias that could be expected to affect this research was method bias which arises due to the way that the criterion variables are perceived by the participants (Podsakoff, et al. 2003). Method bias can occur when responders replying to inquiries posed by the investigator have a propensity to reflect more deeply and rationalise their responses in a way that would not normally occur at the same level in

actual life situations because of a desire to provide 'positive' answers. This 'trustworthy effect' is liable to occur when participants are requested to provide assessments of their personality and appreciation (Podsakoff et al 2003). With the specific objective of reducing the influence of response biases, measures were used that had unique scale response formats (e.g. never/ occasionally to often/ very often) which were merged with contrary coded items.

The key prerequisite for reliable and validated quantitative instruments in Stage 1 was accommodated by choosing study tools which were considered to have satisfactory psychometric properties that could be depended on to provide solid and valid results when used with intensive care nurses. The selection of a reliable and acknowledged tool to measure the research model's variable (work stress and job satisfaction), was acknowledged to be important for the existing research, specifically since one of the researcher's concerns was to build a picture of the level of work stress and job satisfaction around a population of intensive care nurses working in the KSA. The other prerequisite for the selection of tools was a clear collective process and easily comprehensible questionnaire items. This was achieved by selecting tools that had been originally designed to meet these requirements.

The selected research instruments chosen for Stage 1 of the study had been designed and developed in Western nations, so a small pilot trial was initially undertaken to ascertain whether these tools were appropriate for intensive care nurses in the KSA. A pilot study was conducted among thirty nurses to cover all the units where this research was to be carried out, to determine the clarity of questions, the tools' effectiveness, the time needed to complete the surveys, and the success of the data collection strategy. Three small samples (10 participants each) of ICU nurses, including some who had previously worked in Western countries, were drawn from the hospitals. They were requested to make notes on the applicability and suitability (validity) of the surveys. The results showed that the instruments appeared suitable to meet the research questions and objectives. All questions were answered without any clarification needed. The researcher estimated 20 minutes' time was needed to complete the surveys. The clinical supervisor and my two academic supervisors were consulted and the questionnaires agreed. Three instruments were used to collect the quantitative data:

- A demographic survey
- The Critical Care Nursing Stress Scale (CCNSS) (see 'Stage 1 (quantitative): Critical Care Nursing Stress Scale (CCNSS)', below)
- McCloskey/Mueller Satisfaction Scale (MMSS). (see 'Stage 1 (quantitative): McCloskey/Mueller Satisfaction Scale (MMSS)', below)

The semi-structured interview guide for Stage 2 was developed to clarify understanding and identification of themes. The use of semi-structured interviews supplied a rich account of ICU nurses' experiences of living and working in Saudi Arabia's unique culture. Another consideration for using semi-structured interview information was to verify and validate the quantitative data and assess the link between the outcomes and the theoretical framework.

Once ethical approval had been obtained from Anglia Ruskin University (Appendix IV) and from the two hospitals (Hospitals A and B) (Appendices V and VI) and approval had been obtained from the authors of the questionnaires to use their data collection instruments (Appendix VII and VIII), arrangements were made with every unit manager, for the researcher to distribute the questionnaires amongst the potential participants as agreed by the ethics committee. Throughout this process, appropriate ethical practices were observed. The researcher gave several presentations about the research, in each hospital, in order to maximize opportunities to access potential participants. The researcher also made plans to visit the units in order to meet with as many of the potential participants as possible and was available on the telephone at any time to answer participants' concerns or enquiries.

Table 6: Summary of Data Collection Methods

Data collection method	Why beneficial	How undertaken	Who from
Questionnaire	Provides demographic data and baseline information for discussion/ clarification in interview	Sent to participants for individual and confidential completion	Intensive care nurses
Semi-structured interview	Clarification of understanding from the questionnaires	One to one, face to face, tape recorded interview in a private space convenient to both parties	Intensive care nurses who completed the first questionnaires

To evaluate reliability of the work-related stress (CCNSS) and job satisfaction (MMSS) questionnaires, the Cronbach alpha test for internal consistency was applied. Table 7 presents the post-hoc reliability tests for the CCNSS and MMSS. The findings of the Cronbach alpha test demonstrated high reliability for the CCNSS used in this research (0.941): the coefficients for the subscale exceeded the conventional accepted value of 0.70, and were marginally higher than the coefficient alphas reported by then tool developers.

Table7: Reliability Tests for CCNSS and MMSS

Questionnaire	Cronbach alpha coefficient for this research	Cronbach alpha coefficient for the original research
CCNSS (work-related stress) all items combined	0.94	0.89 (Sawatzky, 1996).
MMSS (job satisfaction)	0.92	0.88 (Mueller and McCloskey, 1990).

Stage 1 (quantitative): Demographic Survey

The first survey tool to be applied was used to establish the demographic profile of the ICU nurses (Appendix IX). It contained twelve individual questions developed by the researcher to collect data about the demographic characteristics of the participants, such as age, gender, marital status, education level, and years of experience, status of work, shift patterns, nationality and years of service in the KSA. However, nationality was subsequently removed as requested by the ethics committee of one of the hospitals and replaced by a category of social origin. Most of the questions were presented as closed-end questions whilst some were, of necessity, open format, such as age and years of experience.

Stage 1 (quantitative): Critical Care Nursing Stress Scale (CCNSS)

The CCNSS developed by Sawatzky (1996), consists of 40 questions in which participants are asked to assess their individual responses to stress (Appendix X). It is a self-reported questionnaire that typically takes a maximum of ten minutes to complete and is an instrument used to specifically target intensive care nursing stress rather than job stress *per se*. The reason behind selecting the CCNSS as a quantitative measure of job stress among intensive care nurses was that not only does the scale measure job stress among intensive care nurses generally, but also different subscales of the job stress phenomena under study, which best describes the researcher's perception of the theories on job stress.

The five CCNSS stressor categories are: management of the unit (12 items); interpersonal relationships (7 items); patient care (10 items); knowledge and skill (5 items); and physical work environment (6 items). The 40 items were arranged and measured in a five-point Likert scale ranging between zero for 'never', one for 'almost never', two for 'sometimes', three for 'most often' and four for 'very often'. Scale items measure the phenomena of stress from four aspects (subscales) which are the frequency

(how often do those stressors occur?); the intensity (how stressful is, or would this stressor be for you?); threat (threatening situations are stressful) and challenge (challenging situations are stressful). The author of the scale gave permission for the use of the CCNSS in this study (Appendix VII).

The CCNSS was designed in an easy to understand English language form and as all nurses employed at the research setting were able to speak and write English fluently, there was no need to translate the original survey into the respondents' respective dialects. One of the criteria stipulated by the hospitals' human resource departments is that all prospective hired expatriate nurses must pass an English language test. Only nurses who pass the exam are processed for hiring. The key reason for selecting the CCNSS as a quantitative tool of job stress among intensive care nurses is that not only does the tool measure job stress, but also contains different subscales of the phenomena under investigation, which supports the investigator's concept of the theories on job stress.

Published nursing research studies to have used the CCNSS includes Al Shalaby and AIDilh (2015), Mims and Stanford (2004) and Sawatzky (1996). Mims and Stanford suggested more studies in larger samples using the CCNSS. Although the CCNSS has demonstrated reliability in many research studies, the tool has been criticized for the potential of the subscale to not necessarily reflect other stressors that touch speciality clinical areas such as renal or emergency departments. Further research in specialised areas of work-related stress has therefore been advised (Andal, 2006). In their absence, the CCNSS is still the tool of choice utilised in studies of nursing stress in intensive care, despite weakness in terms of relevance to particular specialities (Al Shalaby and AIDilh, 2015). Despite that the construct of the CCNSS does include more generic issues that are broad enough to not refer directly to different specialities of ICU such as the different in stressors between the adult or neonatal ICU which is considered as one of the weakness of this thesis.

Stage 1 (quantitative): McCloskey/Mueller Satisfaction Scale (MMSS)

Nurses' job satisfaction was measured using the McCloskey/Mueller Satisfaction Scale (MMSS) (Mueller and McCloskey, 1990) (Appendix XI). The scale was devised to intertwine the idea of job satisfaction multidimensionality in theory and instrumentation. The aim of the developers was to produce a job satisfaction measure, specifically for use in nursing, which would be reliable, valid and simple to use. Mueller and McCloskey

(1990) had reviewed the Index of Work Satisfaction (IWS) developed by Stamps and Pedimont (1978), but claimed it was overly complex in its scoring system as a result of its 'satisfaction' and 'importance' components. However, some aspects of the MMSS do appear to be structured around, and based on, factors created for the IWS (Stamps, 1999; personal communication). The MMSS uses a 5-point Likert scale with the following ratings: 1=very dissatisfied, 2=moderately dissatisfied, 3=neither satisfied nor dissatisfied, 4=moderately satisfied and 5=very satisfied. The test-retest reliability of the MMSS as documented by Mrayyan in 2005 noted a Cronbach's alpha of 0.92 whilst the original Cronbach's alpha noted by Mueller and McCloskey (1990) was 0.88. In this study, the 31-item MMSS showed better reliability ($\alpha=0.92$) over the original CCNSS ($\alpha=0.88$) (Mueller and McCloskey, 1990) (Table 7).

It might be argued that the MMSS is a job satisfaction tool for nurses, but not specifically for those working in intensive care. However, the MMSS tool is again broad enough to capture many of the issues as the generic nursing questions apply equally to specialities like ICU (Mrayyan in 2005).

5.6.2.4 Stage 1 (quantitative): Theoretical congruence of the Scales for the Job Demands-Resource Model

As noted earlier, the CCNSS and the MMSS are recognised and widely applied tools in critical care nursing/ nursing research so support validity criteria.

The theoretical alignments of the measures with the JD-R model were considered; all variables picked up were dependent on questions taken from the CCNSS questionnaire designed by Sawatzky (1996) and the satisfaction survey developed by Mueller and McCloskey (1990). The CCNSS scale consists of twelve items where participating ICU nurses are asked to report the degree to which their workload is a source of stress for them. Sample items comprise the variables testing the twelve job demand variables that were picked from the CCNSS questionnaire: inadequate staffing, incompetent medical staff, incompetent nursing staff, supervising students, emergencies and admissions, unavailability of physicians, shifts, paperwork, patient not needing ICU, charge position, floating out of unit and lack of continuity in patient assignment. Demands in the JD-R model divide up conveniently into work demands (staffing, time, characteristics of the job), availability of the physical resources (e.g. equipment for the work), shift working/ work-life balance, and emotional demands (e.g. bullying, threats, empathy, costs). This scale therefore relates to 'Demands' identified within that dimension of the JD-R model, albeit more broadly.

The strength of the JD-R is that it is a balance model for evaluating job stress that has incorporated the original job demand-control and the effort-reward models, and is widely used. The balance aspect is also useful in that if 'demand = resources' then all is well. Resources include: role ambiguity/conflict, communication, management support, peer support, reward, autonomy etc. Personal resources are also built-in, mainly at a level of self-efficacy. In most instances therefore it is comprehensive, especially for managers, and so the CCNSS can to a great extent be related to it. However, the model has limited recognition of emotional demands in healthcare and support of patients and is also less explicit about the interactions whereby poor resources (e.g. support) actually may become demanding.

Evaluations of job satisfaction identify that sources considerably overlap with those of job stress (e.g. McVicar, 2016) to the extent that the two phenomena are strongly but negatively highly correlated. Measures of job satisfaction therefore incorporate factors found in job stress measures. The dimensions/factors identified to operate in the JD-R stress model therefore relate directly to those of job satisfaction and the MMSS scale of nursing satisfaction was applied with that in mind. The scale consists of 31 items that supply an indication of the level to which the participants feel satisfied with their job (Appendix XI).—The MMSS is a generic satisfaction scale which, as noted earlier, has been widely applied in healthcare evaluation studies.

5.6.2.5 Stage 1 (quantitative): Procedure

The process of Stage 1 data collection began and lasted for a period of four months. A total of 700 questionnaires, along with participant information sheets including all relevant information about the study (Appendix III), were distributed by the researcher to potential participants in the two hospitals. Questionnaires were handed out personally by the researcher, and by leaving some in the staff room for the night staff. Ethical implications were taken into consideration to avoid any coercion and potential participants were assured that participation was anonymous, voluntary, and they could withdraw from the study at any time as explained in the participants' information sheet for Stage 1. Moreover, potential participants were also made aware that willingness to volunteer was not influenced by the expectation of benefits or rewards.

The researcher also placed additional questionnaires and provided collection boxes in each break room on every unit, with the name of the research study on each box, for nurses who were on night or weekend duty. Completed questionnaires were collected from these points on a daily basis by the researcher. The researcher was unable to use an online questionnaire because of the limited access to staff email addresses and because this was not included in the approval from each hospital's ethical committee.

5.6.2.6 Stage 1: Quantitative data analysis strategy

Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS), version 20 for Windows. Prior to the main analysis, the frequencies of all variables were examined to assess the accuracy of data entry and missing values. Missing data for the variables ranged from less than 1% to 2.1%. Before undertaking data analysis, all of the raw data from each data collection phase was first entered, coded, saved and then printed and crosschecked in order to detect any input errors.

Research questions 1 and 2 refer to the levels of stress and satisfaction perceived by ICU nurses in KSA. Research question 3 refers to those work factors that most impact on nurses' perceptions of stress or satisfaction. The survey tools, the CCNSS and MMSS, provide measures of perceived stress or satisfaction according to individual scale items or those grouped as sub-scales, or as a total 'global' score of all items/sub-scales. They were applied to answer Research questions 1 and 2, and to provide insights into factors sought to partially answer Research question 3. The latter were intended to inform the interview schedule for Stage 2, which interviewed participants to expand upon those factors that had been identified as important (see 5.6.3, below). As a mixed methods design, findings from the scales and interviews were then integrated to provide a fuller picture of job stress and satisfaction for ICU nurses in KSA.

Both scales used in Stage 1 comprise rating (likert) type questions in which the participant is asked to score the strength of their perception of items related to sources of job stress or job satisfaction, respectively. Conventionally, scores for items, dimensions/factors are expressed as a value for 'central tendency', that is, the value around which the data aggregate usually the mean (average score for a set of data) but possibly median (middle value in a set of data) according to the variability of distribution of data points. That variability may be expressed as a standard deviation value, based on the differences between the scores of individual items and the mean value, or perhaps as ranks according to ranked-order of values, or perhaps just as maximum-minimum ranges. The expression affects the strength of inferential analysis that is applied. Data distribution that is symmetrical around a mean value, so demonstrating a 'normal' distribution, lends itself to parametric statistical methods considered more powerful than non-parametric distributions, where the distribution is skewed to one side of the central tendency point which in this instance will likely be represented as a median value and distribution by rank-order or by range. The first stage in the analytical strategy therefore was to ascertain the distribution type of scores for the survey outputs (see Section 6.2.2 for details) as this determines the statistical methods to be applied.

Stress and satisfaction score data did not conflict with assumptions that data were normally distributed so making parametric approaches to analysis applicable. Some demographic data (e.g. nurse status, age) were categorised while others (e.g. gender; marital status; shift working) were dichotomised (e.g. male/female) to enable data to be described but also to be entered into inferential analysis of potential influence on scale scores. Data means, standard deviations, percentages, frequencies and/or range were used to describe baseline data as appropriate.

Inferences from the data were made by application of three main approaches. Firstly, interpretation of the magnitude of perception of dimensions of work stress or job satisfaction was made according to suggested threshold scores in the CCNSS for level of stress, or MMSS for level of satisfaction, respectively. These were based on the mean value being within the 25th (low), 50th (moderate) and 75th (high) percentiles as recommended by published studies (details in Chapter 6). Secondly, influences of participant demographics on scale scores were analysed by evaluating differences between mean values of factors/categories. This applied a One-way Analysis of Variance (ANOVA) when there were more than two means to be compared, for example in relation to stress scores according to nurse status as Junior, Senior or Charge Nurse, or by applying an Independent t-test where just two means were compared (e.g. stress scores according to marital status). Thirdly, bivariate correlational analyses were undertaken using Pearson's *r* coefficient to evaluate (a) relationships between the CCNSS sub-scales (stress frequency, intensity, threat), (b) between the stress sub-scales and Age (which had demonstrated differences in mean values), and (c) between Total satisfaction and Total stress and the stress sub-scales. In bivariate analysis the *r*-coefficient has a value of between -1 and +1. Zero represents no correlation whatsoever, while 1 represents perfect correlation between the two either in a negative (-1) direction or positive (+1) direction. In all inferential analyses, statistical significance was set at the $p < 0.05$ probability level.

5.6.3 Stage 2: Qualitative Methods

The information gathered in qualitative research takes the form of written or spoken descriptive accounts rather than statistics (Ralphet, et al., 2002). Throughout analysis, this information is reduced to themes which are then considered and evaluated individually. Qualitative researchers can be more flexible when investigating phenomena in their normal setting rather than of being controlled by a relatively narrow group of parameters. There is more emphasis on the explanation and finding; researchers look for emotionally rich, profound, thoughtful and spontaneous insights from the participants.

Qualitative approaches to research incorporate a range of approaches for gathering and analysing research material involving interviews, focus groups, observations and documentary analysis (Denzin and Lincoln, 2005). Qualitative methods aim to explore the phenomena of lived experiences and to interpret individuals' actions or words.

A positive aspect of interviews is that participants may feel valued because the process is based on their words, not numbers, and results are a reflection of the participant's point of view, not the researcher's point of view: the researcher is seeking the participants' opinions and points of view regarding the issues under investigation (Armitage, et al., 2004). In-depth and semi-structured interviews allow participants to explain, in detail, their experiences and practices in their own words; a desirable feature in research concerning human perceptions (Murphy and Dingwall, 2003). According to Bernard (2000), there is a sequence of interview positions which depends on the extent to which the researcher influences the responses of the interviewee. The researcher can manipulate the sequences to use tightly structured questions, semi-structured questions, or a totally unstructured and more flexible discussion. The diverse types of interview produce various kinds of information, all of which can be of value to a research study.

5.6.3.1 Stage 2 (qualitative): Recruitment Process

Sampling, including identification, collection, and access to the relevant social units, is a critical element of planning a qualitative study. Patton (2002) has suggested that qualitative research sampling seeks to identify key persons, episodes, or settings, which are able to illuminate the research questions and afford a rich source of information (Patton, 2002). Furthermore, qualitative research seeks to increase the trustworthiness of findings by ensuring that a wide range of information is identified and collected (Procter and Allen, 2006). To achieve this, the qualitative sampling in the second phase of the research used two non-probability methods: purposive and snowball sampling.

In purposive sampling, participants (ICU nurses) with diverse backgrounds and cultures were targeted as suggested by de Vos, et al. (2005) in order to select individuals or groups based on: knowledge of the phenomena being studied, their relationship to the study enquiry, the theoretical position and analytical scope, analytical practice and, most importantly, the argument or the exploration being developed (Mapp, 2008). The dialectics and strength of purposive sampling was in choosing data-rich cases which allowed the researcher to gain information about the topic, related to the aim of the research question (Patton, 2002). The selected participants represented different levels and grades, allowing the study to focus on their differential levels of work-related stress,

seniority, and the category of their nationality (social/cultural origin). Participants from various medical and ethnic backgrounds, with different cultures and traditions, were included to enable reporting on varied and detailed descriptions of their experiences and feelings during the research.

Just nine participants who had completed questionnaires in Stage 1 indicated that they were willing to take part in qualitative interviews. As this number was not sufficient and as there were still new themes emerging three weeks after starting the interviews, I planned to use snowball-sampling techniques in order to recruit more participants, as advised by Norwood (2000). I asked the existing interview participants to invite colleagues who had also met the inclusion criteria, to participate in the study. Bernard (2000) has suggested that snowball sampling can be more effective when recruiting participants from comparatively small populations (e.g. ICU nurses) who are likely to be in contact with other members of those populations. Those participants who had indicated their willingness to participate in an interview during Stage 1 of the research were given a 'Participant Information Sheet' (PIS) which provided information specific to the second stage of data collection (interviews). A further ten participants were recruited using this process. From these additional interviews, more new themes emerged. The recruitment of participants for the qualitative interviews ceased when their number reached 19, when no further new themes emerged and saturation was achieved. Details of the participants are presented in Chapter 6 (Quantitative and Qualitative Findings).

In terms of the sample size for Stage 2 (qualitative), I used a completeness strategy as the main guide for the qualitative sample size. Completeness refers to all the gained data that supplies a total sense of the meaning of the concept, theme and process and that provides reasonable answers to the research questions (Schutt, 2011). Thus, the qualitative approach concentrates on obtaining rich data and deeply exploring information regardless of the total number of participants (Jones, 2002). Yelland, et al. (2016) confirmed that a sample size of 90 for a qualitative study is neither too large nor too small if it “results in a new and deeply rich understanding of experience.” (p.153). In other words there is no clearly defined means to determine in advance what the sample size should be.

Mason (2004) stressed that in a qualitative study the sample size is determined not by the need to ensure generalizability but by the researcher's willingness to examine the selected subject completely and to provide information-rich data. Qualitative research does not need tightly defined rules to determine an appropriate sample size but there are some widely accepted considerations and parameters linked to decisions about it. Qualitative studies normally depend on a smaller number of participants than in

quantitative research studies and, according to Silverman (2009), they should be considered to be knowledgeable about the phenomenon with the aim of exploring issues and concepts in depth. However, recruiting too small a sample can lead to difficulties in supporting the claims of having achieved either informational redundancy or theoretical saturation. Conversely, too large a sample may not allow for deep, case-oriented analysis, which is the aim of qualitative research (Onwuegbuzie and Collins, 2007). In the qualitative phase of this study, after my discussions with academic supervisors, the final sample size comprised, as noted above, a total of 19 intensive care nurses of different grades and levels in Hospital A and Hospital B; all had good English communication skills. The decision about the sample size was guided partly by a desire to cover a certain degree of demographic variation amongst the selected participants and by the need to achieve theoretical saturation. However, the guiding principle for the qualitative sample size was completeness. Deciding on the sample size is a dynamic process and was guided by the existing evidence and literature, data saturation and the need to ensure maximum variation in the selected sample; a process that begins at the start of the research and continues during the data collection phase.

Potential participants responding to the snowball approach exceeded the initial target of 20. Remaining, potential participants were sent a letter (Appendix II) thanking them and expressing appreciation for their willingness to participate in the study, but informing them that the study had recruited the required number of participants. It explained that the researcher would contact them again if their participation was later still required. A paid, stamped addressed envelope was enclosed with the letter so that they could indicate whether they were still willing to participate in Stage 2 of data collection at a future date if appropriate.

5.6.3.2 Stage 2 (qualitative): Data Collection

Interviewing is the most important and frequently used technique for qualitative research because it is connected to human feelings; therefore, the data needs to be obtained and integrated through the eyes of the participants (Yin 2009). Accordingly, I utilized semi-structured interviews in this research to deeply explore intensive care nurses' points of view regarding the phenomena of job stress and job satisfaction. The collection of qualitative (and quantitative) data took place over a period of almost six months.

I used semi-structured interviews in this study as they are topic-focused, informal, conversational and impartial (Patton, 2002; Yin, 2009) and allow the participants to

express their feelings and share data that may not be naturally covered within the line of surveys. Semi-structured interviews involve two-way communication and mainly open questions, offering the interviewee the opportunity to express their feelings and perspectives about the themes presented by the researcher. I used semi-structured interviews in this research because I wanted to focus directly on the topic and gain specific data from the participants whilst being guided by the phenomena being investigated (Merriam 2009). Semi-structured interviews also provided me flexibility on how to word the questions, and because they are the most common form of interview used in research studies, this is a justification approach taken by researchers wishing to ascertain nurses' views. They are sufficiently open to ensure that the participants' responses explore the research questions in as much detail as possible.

Semi-structured interviews are appropriate amongst participants who are normally busy and must make the best use of their time (Bernard, 2000; Yin, 2009). Semi-structured interviews were used in this study because they control the issues being investigated and help the researcher to gain specific data from the informants. (Merriam, 2009). In this research, the interview content was influenced and designed by the underpinning theoretical framework of job stress and satisfaction.

The role of the researcher within the interview is very important to their ability to collect enough related and appropriate information. Typically, the personal position of the investigator is adopted when the interview is conducted. As a manager of an ICU unit in another position, my personal position was not known to participants, which helped in avoiding bias. Effective interviewing skills are a mindful interviewer, sympathy to the feeling of the interviewee, patience to tolerate and allow silence, being expert in motivating, cross checking, and non- judgemental (Denscombe, 2008). Most important are effective communication skills, which I had developed throughout my professional career as a nurse manager and clinical instructor. Interviews can even provide a depth of data surrounding the investigated topic and give the researcher important insights, but they can be time consuming. I conducted practice interviews with friends at my work place, as advised by my supervisor, to check the equipment and familiarise myself with the process of interviewing.

I faced various issues, which required consideration when I was conducting the semi-structured interviews: a positive relationship and rapport must be established between the researcher and the participants to promote a friendly and relatively informal atmosphere, to make them comfortable in participating in the research study and to encourage them to answer the questions freely (Mason, 2004). Semi-structured interviews can minimize participants' inhibitions but there is a potential danger that

participants may consciously or unconsciously respond and adjust their replies to satisfy the researcher or to present themselves in a positive light (Holloway and Wheeler, 2002). During the interview stage, I worked to gain and establish a trusting relationship with the participants by using a supportive approach whilst emphasizing the need for clear and honest answers. Questions were presented in a clear and organized flow and the effect of my presence as the researcher was minimized (Tod, 2006). I continually assured all the interviewees that their responses were confidential.

Mason (2004) stressed that the fundamental issue that should be considered when guiding semi-structured interviews is generating data relevant to the aims and objectives of the research. Thus, a group of topic areas was selected to guide the interviews in this study based on the result of the quantitative stage, thereby ensuring that the same topics were explored and same question were asked with all participants. Similarly, Bernard (2000) reported that interviews must be guided by a list of questions in a specific order. Using the interview guide makes the information gathering process more methodical for both the researcher and the interviewees. I continued interviewing and probing until I felt that no more information could be obtained (Merriam, 2009).

As this research was conducted with professional intensive care nurses, it was the researcher's responsibility to cooperate with the unit managers to ensure an effective and efficient use of nurses' time during the interviews.

Interview schedule

After analysing the data from Stage 1, the semi-structured interview questions and interview guide were developed following discussion and agreement with the academic supervisor, to enable a deep exploration of the participants' stressors. The questions were developed through an iterative process that involved returning to the literature and consulting with the nursing experts on several occasions. Key findings in the literature were nursing stress, work related stress, satisfaction, job demand and job resources and organization outcome. An interview guide was developed to confirm the coverage of the data linked to the theoretical questions that are the focus of the study (Appendix XIII). This was based on the results of Stage 1, through an iterative process. The questions did not encourage specific answers and no leading questions or prompts questions were used (e.g. do you have too much work?). Questions used in the beginning of the interview began as follows, "Explain to me regarding...." Questions at the mid-point of the interview concentrated on stress and satisfaction, while questions near the end of the interview asked about living and working away from the participants' home country and away from their close family and friends, and what impact this had on them. This order of questions

was applied to initiate trust and comfort with sharing, while also ensuring that topics central to the study were investigated.

The guide covered three sections, specifically: contextual demographic information on the intensive care nurses included in the study; sources of work-related stress amongst the critical care nurses in the KSA, and issues that might have affected job satisfaction levels amongst critical care nurses.

The interview questions were modified in discussion with the academic supervisor to ensure that they addressed the research questions and objectives and a pilot interview was conducted with two work colleagues. The aim of the pilot interviews was to pre-test the appropriateness of questions to participants. Data gathered during the piloting were audio recorded and transcribed. This gave me the opportunity to gain information about the importance of using specific and job-related examples, during the semi structured interviews, to solicit rich descriptions of processes.

Once ethical approval had been received from Hospital A and Hospital B, and Anglia Ruskin University's Ethics Committee, the first participant was recruited, and interviewing began.

A participant information sheet for Stage 2 which explained the aim of the research was again given to participants and signed consent was obtained once more before I started the interviews.

Following agreement with the nurse managers in each hospital, all the interviews took place in the hospitals within the normal working hours for the nurses. The interviewees were asked to choose a time and place most suitable for them and every effort was made to provide a comfortable and relaxed venue. Participants who had no preference in their choice of interview venue were interviewed in a quiet interview room in the hospital where they worked, to provide privacy and to minimize any opportunity for interruptions. Appointments were organized with the participants and schedules developed to interview them with the cooperation of unit managers. All interviews were conducted on day shifts when participants were at work, to avoid them having to come to hospital during their day off and a quiet, suitable room was provided for the participants to maintain privacy and make them feel comfortable whilst avoiding any potential interruptions.

All the interviews were conducted in English in a seminar room within the nurses' units during the participants' working hours, and lasted for between 40 - 55 minutes. The interviews ended naturally, based on the level of spoken English language of the participants. These interview venues were chosen because the literature highlights the

need for the researcher to maintain confidentiality and for the participants to be relaxed and open. Interviews should therefore be conducted in a familiar place where privacy is well maintained and participants have enough time to express their feelings and perceptions freely, without any interruption or influence (Herzog, 2005).

Every interview was digitally recorded, and all the interviews began with a brief summary outlining the aim of the study and the ethical basis of the study whilst stressing the right of participants to withdraw from the interview at any time without giving any explanation or reason for doing so. All the interviewees were told about the nature of the interview, where participation was voluntary and they were guaranteed full confidentiality. All the interviewees were interviewed personally on a face-to-face basis. Interviewing face-to-face allows the researcher to spot verbal and non-verbal reactions, and through facial expressions and other body language the researcher can detect whether the interviewee experiences any discomfort or stress (Leedy and Ormrod, 2005). I responded positively to any discomfort shown by the participants by asking them if they wanted to stop or move on to another question, or by offering the interviewee water and assuring them that they were free to not answer sensitive questions or that they could even stop the interview without penalty, simply by informing me of their decision.

Upon conducting the interview, each participant was asked if they would like to add anything to express any additional feelings or thoughts that did not arise during the interview, or to emphasise any specific concerns or issues. Even though I was not a very expert interviewer, I met the five essential criteria set by Moustakas (1994) and was guided by the clinical supervisors. The five essential criteria met were 'experience with the phenomenon being studied', 'reasonable interest in understanding the true meaning of his/her own experience', 'ability to articulate that experience in a meaningful way', 'an agreement to participate in a tape-recorded interview' and 'agreement to possible publication'.

There are three kinds of qualitative methods that have been implemented on work stress and job satisfaction. The most commonly used type has individuals of an occupation, such as intensive care nurses, describe in their own words verbally, or in writing, their clinical experience. This is the method I used as it best suited the aim and objective of this research. Several research studies on WRS have adopted this type of method (e.g. Thelwell, et al., 2007). I asked the participants to describe in their words their feelings and beliefs about the stress they encountered in clinical areas. The other two kinds of qualitative research studies include researchers who locate themselves in the clinical area observing workers in that area performing their job, and observation where the investigator works at the type of work he/she aims to investigate in order to explore

elements of the phenomenon being studied. In order to recognize if the interviewee experienced job stress, I asked them about their emotional or physical reactions in the past 6 months to what are considered significant indicators of stress (e.g., sickness, anxiety, and difficulty sleeping). The level to which stress affected participants was not highlighted in screening; the reality was that if participants reported having experienced a physical or emotional response to what they perceived as a stressful event, this was enough for their report to be considered as a significant example of job stress (Bora et al 2015).

Interviews continued for 40 to 55 minutes without any complications or problems. Variations in the length of interviews were dependent on how willing the participants were to talk in more depth; short interviews will not provide enough data to cover the topic investigated, and longer than an hour may lead to the participants losing interest (Waterman, 1998). All interviews were digitally recorded, and I took field notes during the interviews to provide further contextual information. Writing field notes helped me to recall the participants' actions, which could be extended to involve 'reflexive validity' and improve the focus of information gathering (Waterman, 1998). Thus, I continued writing field notes to keep reflecting on the process of study, utilising documentation of minor or more serious problems that were raised during the process of interviewing.

To ensure accuracy of all recorded interviews, the first two interviews were listened to before resuming interviews with the rest of the participants. Furthermore, each transcribed interview was checked for truthfulness by listening to the tape whilst reading the transcripts at the same time. In addition to the participants' narratives, my own experience as a researcher and ICU nurse were other sources of information in this study. The experiential information was analysed as the research progressed. During the interviews, I concentrated on remaining neutral and avoiding judgmental or verbal behaviours, even when interviewees tried to seek an opinion from me or to divert the questions to myself.

The language used in presenting the information collected and analysed in this research is personal and informal. The personal voice is an acknowledgment that the investigator is a part of the topic being investigated, that he made decisions in the course of the research that would have affected what information was gathered and presented, or not gathered, and that the reasoning that was applied was unpredictably affected to some extent by his own beliefs and views (Al Nusiar, 2017). To minimize the possible effect of my own beliefs and view on the study as I am an intensive care manger, I tried to understand when and where to collect information during the interview (please see section 5.7.4 for more details).

5.6.3.3 Stage 2: Data Analysis Strategy

The interview process in this research consisted of the interviews with the participants, the recording of the interviews, the taking of memoranda and transcribing the interviews. The qualitative data was analysed using standard thematic analysis to explore the information obtained from the semi-structured interviews, following the step-by-step guide of Braun and Clarke (2006). The process involved dividing the written material into meaningful themes using applied rules (Mason, 2004). The semi-structured interview data was transcribed and summarised. Evolving themes were identified across all intensive care nurse participants. The goal was to identify potential similarities or discrepancies in participants' points of view of the subject being investigated. The qualitative results are presented in detail in Chapter 6. In detail the process was as follows.

Recorded interviews were transcribed verbatim into English, which helped me as a researcher to immerse myself in the text and obtain familiarity with the participants' language and the ability to use "in-vivo" codes. As mentioned previously, some of the participants did not use English as their first language such as Jordanian nurses but the rest are speaking English perfectly. Because of this and to ensure that I understood the points that the participants were making about their experiences, an effort was made by the researcher to ask more detailed follow up questions of the participants. In addition, the transcripts were read and re-read before starting analysis and any possible mistakes were cross-referenced with the audio recording to make sure that the transcriptions were accurate. I managed the interview text using manual techniques.

Developing themes were acknowledged across all participant intensive care nurses. Self-transcription is recommended by Poland (1995) who highlights that transcription of interviews by researchers gives them first-hand knowledge from their involvement in the interview process. Information was analysed by a phenomenological psychological method presented by Giorgi (1997) and considered ideal for use with research conducted in the practice of phenomenology (Van Manen, 2002). The main four steps of the Giorgi analysis, used in the analysis of this research's information, are described below.

The first step of analysis involved me reading and re-reading each transcript in order to get an initial idea of the whole story and to familiarise myself with the data and the reflections presented by each interviewee. Secondly, I read through the interviewees' accounts for a third time and highlighted those areas in the narratives where a transition in meaning occurred from a psychological perspective: these were identified by as the

'meaning units'. The purpose of the first two steps was to identify the main themes collected from the discussions and to start organising them.

The third step involved gathering together all the similar meaning units identified in the data from the entire research group and giving them labels (narrative codes) that represented the different clusters of psychological insights being expressed at each level of abstraction. Also, during this third step of Giorgi's process, inductive logic was applied to order the meanings and insights into themes and conceptual categories that best represented the topic reflections described by the interviewees. In the fourth step, I synthesized all the transformed meaning units (themes and conceptual categories) into consistent statements that communicated the shared insights about the meaningful experiences that the research group revealed.

It is worth illustrating the nature of the transitions in meanings that were identified as meaning 'units' during the second step of analysis. One particular example involved a male nurse who reflected upon his feelings about coming to work in the KSA and mentioned that he thought it might be stressful because he would be leaving his family. However, when he arrived in the KSA, he became aware of the fact that not only was he right, but it was in fact much more stressful than he had anticipated. He said, *"I knew that it would be stressful from researching about the life in KSA, but nobody told me how stressful it is"*.

I marked this change from 'thought' to 'reality' as a meaning unit. Common meaning units identified by other intensive care nurses about culture, workload being stressful, discrimination and lack of appreciation or motivation, were similarly identified in each transcript, then collated and transferred to another document and labelled using the same word used by the participants so as to keep true to the original information.

In the above example, the meaning unit "very stressful" was labelled as a transition, identified using the direct word "very stressful", and entered into Codebook I as a meaning unit. Words with the same meaning identified throughout the whole research were highlighted and named and added to the "very stressful" meaning unit. After critically analysing the same words added to the "very stressful" meaning unit, and a comparison of them with the original psychological words describing the difficulties the intensive care nurses met with, inductive reasoning yielded a bigger, complicated and parsimonious awareness of many issues that intensive care nurses acknowledged as being "stressful". Rearrangement of the previously separated meaning units of "stress" in larger, abstract clusters was documented in Codebook II. The more abstract clusters of the different kinds of "stress" experiences identified and highlighted by ICU nurses were arranged and were named "Reality was more stressful than the dream", which

supplied a standard context to the internal psychological meanings presented by every single participant. This process was repeated exhaustively until all the psychological expressions that the ICU nurses voiced as “stressful” in their practice had been presented, collated, and coded with the most suitable terms.

In the next stage, the groupings of “difficult” issues uncovered in the reflections of the ICU nurses were coded accordingly as conceptual categories of psychological meanings and were arranged and documented in Codebook III. At this stage, verbatim descriptions obtained from the transcripts were attached to the conceptual categories to form units of meanings. Movement of the researcher back and forth between the information and the conceptual categories that were collected from the participants was repeated throughout all coding processes, particularly when the researcher scientifically moved back and forth between the conceptual category and the raw information to check for accuracy of fit. Information that was no longer suitable in the collected context was removed or re-coded to conceptual categories that were more suitable in terms of reliable meaningfulness. Identifying the best-suitable conceptual category for any words of meaning relies to some extent on the researcher’s own interpretation. The direct psychological meaning uncovered from the above example that the facts were more stressful than their pre-thought fitted perfectly within the conceptual category named “Everything is more stressful than expected”. This category label arose from a breakdown of all the descriptions the ICU nurses expressed about discovering how life and the working environment in the KSA was harder and more complicated than expected. At the start of the analysis, it might have appeared that separate categories were easy to find. However, as inductive logic was utilized to arrange the same meanings to a particular abstraction, attention was concentrated on the avoidance of skipping to summarise too early, and as information analysis continued, I was continually mindful as to whether or not new conceptual categories were gathered.

Words of meaning were uncovered more frequently than expected among the statements of the research populations, even though participants were characterised by their diverse ethnic backgrounds. Their experiences as intensive care nurses were common to and parallel with each other, making it possible for all information to be analysed together rather than in separate collections. The conceptual categories in which meanings were collected were tested for reasonable interrelationships in the final Codebook.

In the interests of satisfying the presence of reasonable consistency, theme labels distinguished through phenomenological perception were developed for the collections as exemplified in the following example: the conceptual category of “Everything is more

stressful than expected”, together with lateral conceptual categories collected with it due to the similarity of psychological meanings, were subjected to an ultimate analysis of theoretical reliability during which the developing theme “A shocking fact” came to be as the label that combined shared meanings within that schematic. Thus, a thematic label is not the outcome of a ‘listing’ of meanings articulated as conceptual categories, but is a characteristic ‘structure’ which supports persuasive interrelationships among the impressions simply expressed by the subjects.

The purpose of the crucial categories and themes and their final expression remained in focus and under constant examination and revision until and the whole process of analysis was completed and data saturation was achieved (Lincoln and Guba, 1985). In all cases, the categories were verified against the descriptions or examples of information and vice versa.

At all stages of the process coding examples were discussed with supervisors to ensure accuracy and agreement of interpretation, hence dependability.

5.7 Research rigour and ethical considerations

Investigators must take research ethics into consideration at all stage of the research, beginning from the layout of the research questions to interpreting the findings and presenting the results (Oliver 2008). Moreover, other researchers have argued that ethics should be one of the first areas taken into consideration when planning any study and should carry on all the way through to the field-work stage and write-up (Wong and Nather (2015).

Behi and Nolan (1995) reported that these ethical issues influence many aspects of the research design and process and help and help the investigators make a decision as to whether the study is ethically satisfactory. However, Stang (2015) argued that it is mandatory that investigators are not only familiar with the ethical guidelines, but that they need to implement them in the study whenever appropriate. He added too that it is vital to consider all the ethical considerations with the research participants. Therefore, before starting any research, there are some ethical issues that the researcher needs to consider to keep the participants safe from potential harm. Respect and sensitivity should also be extended towards participants (Polit and Beck 2004).The following considers these (Section 5.7.5 below) but firstly it incorporates support for scientific integrity. This is essential in any data analysis protocol. In the earlier example of quantitative data analysis the integrity of data it was emphasised how data assumptions, appropriateness of the statistical test applied, and data interpretation (earlier) contributed to rigour.

5.7.1 Research rigour

Validity and reliability issues in both design Stages - quantitative and qualitative – were discussed and supported at appropriate points (see page 113). They are revisited here to summarise the contribution of the design in maintaining these aspects.

According to Yin (2009), the quality of any research study can be instilled through four mutual concepts, namely: construct validity, internal validity, external validity and reliability. These concerns must be considered in the study. Construct validity is defined as the creation of effective procedures for the research concept. Thus, to guarantee construct validity in this research study, it is critical to apply mixed-method sources of data, to create a chain of data and to have vital informants view the first report copy. These measurements of construct validity were used and obtained throughout this research. As stated earlier, the information was collected from mixed sources (questionnaires and interviews) using a mixed-methods approach. Moreover, the research stages were clearly identified and explored to facilitate understanding of the study steps. Within the study, internal validity is often used to initiate a causal link between situations and is mainly a concern for research studies with an illustrative nature. Internal validity was stimulated in this research by using design matching.

External validity is linked to the generalizability of the research results to other populations and research settings. This could be stimulated by duplicating this research among another ICU nurses and gaining the same findings. However, I tried to provide enough contextual information to allow for similar judgment to be made by other (Guba & Lincoln). Lastly, reliability exists when the processes of the research such as information gathering steps can be repeated with the same outcome and findings (Yin, 2009). For example, when the investigator documents the process in the research and another researcher repeats the same research and achieves the same findings. The vital aim of reliability is to decrease the risk of bias.

Assessing the scientific rigour of qualitative research is not easy because it needs to apply all the criteria of credibility, transferability and dependability to establish trustworthiness (Mansour, 2009). The purposive sampling used here ensures the credibility of the study because interviewees were sought who were likely to understand and respond to the phenomena under investigation (Tuckett, 2005). As qualified,

experienced critical care nurses in the KSA, their views are likely to reflect their beliefs and experiences regarding work related stress and job satisfaction. As recommended by Guba and Lincoln (1989), the data that emerged from the participants' interviews was subjected to techniques and strategies to improve its credibility (credibility, transferability, dependability and insider researcher) (Guba and Lincoln, 1981; Krefting, 1999; Tuckett, 2005).

5.7.1.1 Credibility

Credibility in qualitative research refers to the extent to which the data and results of the data analysis are believable and trustworthy. Credibility is like internal validity – the extent to which the research results match up with reality. However, some researchers may have different realities from others and there is no single reality which can be identified (Mansour, 2009); everyone builds a reality personal to them, and the way in which that affects the study needs to be made explicit (Smith and Ragan, 2005). In other words, there is no objective truth or reality to which the findings of the study can be compared. Therefore, credibility must be increased by 'member-checking' the results (Mansour, 2009) which means obtaining interpretations and conclusions from the participants themselves. To enhance and maximize the credibility of this research, I made a plan with the supervisory team for their interpretations of the data to be compared to my analysis. The constant comparison of the information that emerged from the participants' interviews is an additional method that can be used to increase the credibility of qualitative research findings (Guba and Lincoln, 1989). In order to maintain and maximize credibility, I returned the findings to some participants who were asked if the interpretation of the findings reflected reality as they understood and experienced it.

5.7.1.2. Transferability

Transferability refers to the external validity and conceptual generalization of results that are characteristic of quantitative studies (Guba and Lincoln, 1994). As the aim of qualitative study is not to generalise results to other populations but to identify in which setting the results can be used and shared (Malterud, 2001), this study attempts to extrapolate data that can be shared and applied beyond the study context. While some researchers state that no study, irrespective of the approach used, can provide data and results that are universally transferable (Malterud, 2001), the research design should nevertheless demonstrate a thorough consideration of the level of transferability to other research settings that the research can claim.

According to Tashakkori and Teddlie (2003) there are four kinds of transferability: ecological, population, temporal and operational. The participants who agreed to participate in this research were all working in an adult intensive care context, at the same time and in similar hospitals and were therefore considered to be representative of that context. The themes that emerged from the analysis of the participants' views can be related to other intensive care settings because of the transferability. Therefore, it can be considered that there is a conceptual generalisability in this study's context, at this level, where any participant's experience, if well described, represents a "slice from the real-life world" with current literature (Denzin, 1983 p134). Conceptual generalizability relates to the information or settings instead of the topic *per se*, where the researcher must allow the typicality of identified events, behaviours, or responses to be shared in the lives of others who have involvement with the topic (Mansour, 2009). To fulfil this purpose, the detailed description of the background information regarding the research settings and participants, will enable readers to compare this context to their own and apply the findings to their own context accordingly, and where appropriate gain clarity (Tuckett, 2005B). This leads towards the premise that it is the reader, rather than the researcher, who takes responsibility for the claimed transferability of the research data (Mansour, 2009). In other words, the transferability of qualitative research determines in what settings the results can be utilised (Malterud, 2001). Consequently, it is the researcher's responsibility to deliver as much data as possible on the setting of the research, and it is the reader's responsibility to value this setting and highlight any likenesses with other cultural settings, to share and apply the results beyond the research setting (Koch, 1994).

5.7.1.3 Dependability

The dependability of the research information is like the consistency of quantitative research results, which allows the reader to follow the decision trail taken by the researcher (Guba and Lincoln, 1989, 1994). The interview guide used in this study was developed after analysis of the questionnaires in Stage 1 by a single researcher (me), who also conducted all the interviews with all participants. The reliability of the data therefore depends on the competence and ability of the researcher's interviewing skills and will be affected by any research bias (Guba and Lincoln, 1989; Appleton, 1995). Such bias can be minimised by the researcher practising their interview skills, but it cannot be completely neutralised. In this study, I carried out three pilot interviews which were not included in the findings. These were conducted after ethical approval had been obtained, but before data collection commenced, in order to improve my interviewing skills. Digital recordings of all interviews further increased the reliability of the information obtained during the interviews (Tuckett, 2005).

5.7.2 Insider Researcher

One of the critical issues to be considered about the rigour of this study is the fact that I as the researcher work in an intensive care unit as a manager, in another hospital and therefore there is a probability that the I might share many of the same experiences as some of the participants in this research. The risk is that this might have biased the study, since an insider researcher with the same experience and background as the participants might have involuntarily influenced them during interviews, even though the participants were unknown to the me (Bonner and Tohurst, 2002). This is countered by the risk that knowledge and bias towards data collection and the analysis of results could be taken for granted: there is always a risk that over-familiarization with the setting might guide the researcher to make assumptions without necessarily investigating the reasons to support a particular action (Mansour, 2009). However, one of the advantages of being an insider researcher is that there is the potential to explore issues in depth by gathering more contextual data. In this study, I have tried to understand when and where to collect information during the interviews and my knowledge of the operation and routine of intensive care settings has enabled the collection of detailed and focused information. Nevertheless, I am aware that any kind of research is still subject to bias and that this bias cannot be completely neutralised (Fetterman, 1989; Mansour, 2009). According to Hewitt-Taylor (2002), insider research should be designed to allow the researcher to control the difficult balance between involvement in the field and objectivity in interpreting the findings of the research. This has been achieved in this research by reflecting on actions during the data collection and identifying where ideas or similar beliefs might have affected the analysis of the data. The support and mentoring of my academic supervisors proved to be a valuable tool for addressing this issue.

Reflexivity is a process in both quantitative and qualitative research through which the researcher can identify whether their own social background and experience has influenced the research process (Silverman, 2005; Lathlean, 2006). It is relevant to this study because I work in a setting that is the same as for the object of this study (i.e. critical care). Recognition of the expected tension between my own clinical background in critical care and my role as an independent investigator means that I have had to be careful throughout the study that my 'voice' did not dominate the interviews and that my role was limited to encouraging and stimulating the participants in relating their experiences on issues which influence work-related stress and job satisfaction (Mansour, 2009). It has been well documented that bias cannot be eliminated in qualitative research (Malterud, 2001): I was aware of this throughout the study and maintained an open and impartial mind when analysing the data, taking care not to make inferences from my

personal experiences of stress and job satisfaction by gathering them to bear with the participants' point of view, or by drawing links between them (Mansour, 2009).

5.7.3 Ethics

The human rights of any participant in any study must always be respected and protected (Kalantri, 2003). Sensible care must be taken to protect participants from any harm during research (Polit and Beck, 2004; Kalantri, 2003). Holloway and Wheeler (2002) acknowledged that dealing with human beings requires that extra care be taken; ethical issues must be considered at every research step, protecting both participants and researchers from any harm and ensuring the voluntary participation, anonymity, confidentiality and informed consent of participants at all times (Tod, 2006). However, Ingleby and Oliver (2008) argue that the researcher is required to pay attention to research ethics at all stages of research, starting from the design of the research questions through to analysis and discussion of the findings. In a recent study, Wong and Nather (2015) argue that that ethics should be the foremost issue for consideration and should be implemented effectively when starting and designing any research study. This must be continued through the field-work and write-up stages, as ethical considerations can help the researcher to decide whether the research is acceptable. It is essential that all researchers are familiar with research ethics and implement ethics guidelines at all stages of their research by discussing the ethical considerations of the study with the participants (Stang, 2015).

In the following sections, I discuss the ethical issues that were raised and considered during the study and how they were addressed to prevent any potential harm to participants and/or the researcher, and to confirm that there would be no individual benefit or reward from conducting or participating in the research (Polit and Beck 2004).

Ethical Approval

This research was carried out with full consideration of ethical implications at each stage of the research process. Once ethical approval had been obtained from Anglia Ruskin University's Ethical Committee (Appendix IV), the selected hospitals were contacted. The relevant department in each hospital was approached and an application for ethical approval was completed and submitted with the research proposal (Appendix XIV). This was carried out in accordance with the Research Governance Framework for Health and Social Care in England (Department of Health, 2005). Both of the study hospitals approved and gave full permission to start data collection (Appendices V and VI). As

mentioned earlier, consent was obtained for the two stages (qualitative and quantitative); the researcher stressed in the participant information sheet that accompanied the demographic questionnaire that completing the questionnaire and returning it to the researcher indicated approval and willingness to participate in the research. In addition, a consent form was obtained and signed before conducting the interviews.

5.7.3.1 Autonomy and Informed Consent

Freely given informed consent is a mandatory requirement for any research (British Sociology Association, 2002). It is the researcher's responsibility to explain to contributors what the study is about, who is conducting and sponsoring it, and any other research issues that might arise. Participants should be made aware of what actions are required to address their concerns.

In the participant information sheet (Appendix III), the aim of this study, the advantages, disadvantages and risks of taking part, the process and nature of participation, the researcher's responsibilities, and what the study involved were all fully explained. Potential participants were given the opportunity to ask any questions during the presentations made at each participating hospital before the data collection stage began. I made it clear during the presentations and in the participant information sheet that returning the completed questionnaires indicated approval for inclusion in the quantitative section of the study. Prior to any interview, consent was discussed, and participants were asked to sign a consent form (Appendix XV).

Social research regulations/conventions insist on the right to voluntary participation (Babbie, 2010). Participants were informed that they had the right to withdraw from the study at any time, even after data collection during Stage 2 of the data collection process (qualitative interviews) without giving any reason; participation in Stage 1 was also voluntary but participants could not withdraw after submitting the anonymous questionnaire (as it was anonymous even to the researcher). Maintaining and protecting the participants' privacy was achieved by ensuring confidentiality. Confidentiality involves managing the participants' information in a way that keeps them unidentified and unrecognised (Behi and Nolan, 1995; Creswell 2015; Ingleby and Oliver 2008; Stang, 2015). Participants were provided with all necessary information to give informed consent for their participation in this study. Interviewees were made aware that they could decline to answer any question, request that the tape recorder be turned off, and terminate the interview at any time during the interview (Al-Nusair, 2017).

5.7.3.2 Non-Maleficence

During any nursing research process, clear respect and sensitivity towards participants must be considered, demonstrated and maintained to ensure privacy and prevent harm (Armitage and Knapman, 2003; Stang, 2015). I issued a general invitation to assure all nurses participating in the two stages of data collection that it was safe for them to explore their feelings and views about work related stress and job satisfaction and that any criticism of the administration or managers would not jeopardize their job security because confidentiality would be strictly observed. It was expected that this general invitation would contribute to a safe relationship between the nurses and myself by initiating a trust and encouraging them to participate in the study (Mansour, 2009). Such an invitation does not characterize or specify the nature of participants but is especially useful when dealing with sensitive topics. It avoids implying that the participants are blameworthy or suspect and thus eliminates the factor of stigmatisation (this is a common obstacle to research into nursing errors) instead promoting trust and openness with the participants (Murphy and Dingwall, 2003). This process encourages participants to share their honest feelings and perspectives with the researcher without feeling pressurised or threatened.

Another advantage of the general invitation to nurses to participate is that it augmented the ethical dimension of their informed consent. The participant information sheet clearly stated that participation was voluntary and the interview would be an open, general discussion about nurses' views on work related stress and job satisfaction. To avoid any demoralization and defensiveness during the interview, the researcher avoided expressing or insinuating adverse comments and judgments. This enabled the generation of rapport and facilitated a supportive and non-threatening discussion (Mansour, 2009; Stang, 2015).

It was predicted that some participants might experience a level of stress when deliberating and discussing stressors such as travelling abroad without their families. In anticipation of this the researcher requested from the administration of both hospitals the contact number of a professional counsellor from the respective counselling services in the Occupational Health Department, where more structured support and assistance could be provided. In the event, the researcher was able to deal with any signs of distress by changing the topic or question and by offering a glass of water and a short break, and none of the participants requested to be seen by the councillor. For reasons of personal safety, the researcher adhered to the Lone Researcher Guidelines of the Faculty of Health, Social Care and Education which supported this study, and where I was undertaking my PhD. The guidelines outline the procedures that can be used to

safeguard nurses undertaking research activities such as one-to-one interviews, and decrease the risks associated with working alone.

5.7.3.3 Anonymity and Confidentiality

Ethical standards not only protect privacy but also help to avoid fraud (Bryman, 2004). Confidentiality includes handling the participants' data using a technique that keeps them unidentified (Stang, 2015). To maintain the anonymity and confidentiality of participants in this research, the names and identities of the participants were not revealed during the data collection and analysis phases, or in the reporting of the research results (Tod, 2006), with the proviso that any disclosure of professional misconduct mandated by the ethical code of conduct governing the research would be excepted. Questionnaires were given to participants by their managers and the researcher and by placing some questionnaires for the night nurses to collect. The ICU nurses were requested to put the completed questionnaires in boxes bearing the name of the research in their team room and were advised to not write their names on the questionnaires. Questionnaires were not coded to avoid identifying participants from their code and linking it to the questionnaires. The researcher was aware that not coding the questionnaires could affect the total number of participants, as the researcher wouldn't be able to track non-respondents. However, not coding the questionnaires helped build up a trust between the myself and the participants and that helped in recruiting for Stage 2. I had no contact with any participants until they agreed to contribute to Stage 2 of the data collection (qualitative interviews), or returned the survey to me, thereby consenting to reveal their names and addresses.

Further to the measures taken to ensure anonymity, the researcher removed participants' names and substituted codes during the analysis in Stage 2, so that information from interviews could not be traced back to specific individuals through their role or the type of data supplied. (Al-Nusair, 2017) The names of all participants and hospitals in which this research took place were substituted with pseudonyms. All data from Stages 1 and 2 were stored in a locked office which only the researcher could access and review and the computer on which the data was stored was secured with a personalised login and password (Al-Nusair, 2017). Only the researcher and the academic supervisors had access to the completed questionnaires, to ensure that the participants' confidentiality was protected. The audio recordings of interview data were stored in a locked cabinet, and I undertook the transcriptions of the audio data myself (Mansour, 2009). Participants were given the right to know the results of the analysis if they so wished (Data Protection Act, 2010).

All the data gathered during the course of this research, including questionnaires and consent forms, will be destroyed or deleted within five years of the completion of the study. Tapes and recordings will be erased and destroyed as information will have been transcribed verbatim to support the results of the research as recommended by the European Code of Conduct for Research Integrity. The written study and publication of results will not include any participants' names.

5.8 Quality of the Research Study

Standards important to leading high quality research are the adoption of multiple validation sources, initiating a database and sustaining a chain of evidence. Compliance to these standards maximizes the validity and reliability of the research's results. Triangulation in information collection by using mixed information sources and methods permits the recognition of a rich understanding of the phenomenon investigated (Creswell, 2003). As a finding, triangulation of information stimulates the results and summaries obtained and can be even more considerable. In this study, the researcher applied mixed data sources, specifically the questionnaire and interviews, and mixed quantitative and qualitative approaches.

Therefore, this research design provides a very strong method for obtaining an in-depth and rich understanding of the stress phenomenon, which would not be achievable by using a single data gathering method.

The other principle in conducting a high standard research study is to initiate and implement a research database which collates and documents the gathered information. The research study should create a formal database that can be accessible and retrievable for audit (Yin, 2009). As the information in this research was gathered by questionnaires and by means of interviews, each one is a vital part of the research study database. Yin (2009) reported that research notes must be categorized in such a style that the researcher or other individuals can access them later. To facilitate review of the documents, an electronic version has been made and saved as a portable document format (PDF) to decrease physical storage space. The questionnaire resources have been sorted and saved in the computer file as part of the research database. An annotated bibliography was compiled to facilitate storage as advised by Yin (2009),

5.9 Chapter Summary

This chapter has discussed the study methodology that was applied in this research. The philosophical perspectives of the study were outlined and explored. Research studies can be viewed from different epistemological approaches, such as positivism and interpretivism. This study used a mixed-methods approach to explore job stress and satisfaction among ICU nurses in the KSA: it is an exploratory study. The chapter highlights the justification for using a mixed-methods approach in exploring job stress and satisfaction.

This chapter has also outlined the research design, study setting and population, method of sampling and recruitment, data collection, data analysis, scientific rigour and ethical considerations. Mixed-methods data analysis is a difficult, creative process that is constant, interactive, inductive and reflexive. I used several different strategies and techniques during both data collection and analysis in order to strengthen the degree of reliability and validity and enhance the scientific rigour of the research. Additionally, I was very careful to ensure that both stages of data collection were accurate and unbiased. The next chapter presents and describes the results that emerged from the analysis of the quantitative and qualitative data.

CHAPTER SIX

Quantitative and Qualitative Findings

6.1 Introduction

This study followed a mixed methods (Quan-Qual) exploratory design. In this chapter, for clarity I will present the quantitative and qualitative results separately leading to an integration of the findings later: this is the crux of the thesis as it is a culmination of all that I have documented in the previous chapters. The chapter therefore first presents the statistical analysis and findings that form the empirical results obtained from the quantitative approach (Section 6.2), namely the CCNSS (work stress) survey and the MMSS (job satisfaction) survey.

There are two main statistical approaches to the quantitative stage, namely descriptive and inferential statistics. (see Section 5.6.2.6 for the analytical strategy for Stage 1). Inferential statistics were used to explore the strength of perceived stress or satisfaction by nurses, and differences and/or relationships within the data. The chapter continues with Section 6.3 which presents the findings from interviews (qualitative stage), a qualitative analysis that is related to the third research objective

6.2 Quantitative Findings

The researcher used a structured approach for data collection in this stage of the research by collecting data from three different questionnaires to answer the research questions (Creswell, 2015). Multiple sources of data collection were utilised in order to explain the complexity of the intensive care nurses' situation in Saudi Arabia. The information involved a demographic survey, one instrument to assess work stress for intensive care nurses and one instrument to gauge nursing job satisfaction. Information gathering approaches are an essential part of research design; appropriate choice enhances the value of the study and allows the researcher to maintain and deliver the study's aims and objectives.

The purpose of Stage 1 (quantitative approach) was to answer the first two Research questions of the study by identifying the overall stress levels and job satisfaction among the intensive care nurses, but also to explore potential influences arising from demographic factors so relevant to research question 3. This stage also supported the development of the interview schedule for Stage 2 and so also provided insights to answer Research question 3.

6.2.1 Sample Characteristics

The questionnaires were distributed (see Methods) by the researcher and unit managers, to the intensive care nurses (n=700) who met the selected inclusion criteria at the two hospitals included in this study. Of these, 421 nurses (60%) completed and returned the questionnaires.

This section describes the nurses' personal and clinical demographics. As highlighted before in the methodology chapter (Chapter 5), one reason why demographic data were collected for the total sample in order to examine the heterogeneity of nurses' demographic data across the two centres. Table 8, Table 9 and Table 10 summarise the total number of participants from each hospital and specialist unit:

Table 8: Total Number of Participants from Each Hospital

Name of the Hospital	Total no. of participants	Percentage
Hospital A	173	42.1%
Hospital B	248	58.9%

Table 9: Total Number of Participants by Speciality from Hospital A

Unit	Number of participants	
Medical ICU	54	12.8%
Critical Care Unit	24	5.7%
Surgical Transplant ICU	31	7.36%
Cardiac Surgery Care Unit	26	6.2%
Paediatric Intensive Care	24	5.7%
Neonatal Intensive Care	14	3.3%

Table 10: Total Number of Participants by Speciality from Hospital B

Unit	Number of participants	
Adult ICU	74	17.5%
Neuro ICU	36	8.5%
Neonatal ICU	46	10.9%
Paediatric ICU	39	9.3%
CCU	31	12.9%
Cardiovascular ICU	22	5.2%

Identification of speciality by each hospital identified overlaps, though terms applied to related specialities were not always the same. There were some differences in those identified and also in the proportion of participants derived from those specialities. For example, Hospital B did not include a Surgical Transplant Unit, and the proportion of participants from the Critical Care Unit in Hospital A was less than half that from Hospital B. The profiles therefore identified a degree of heterogeneity in terms of specialities of critical care and representation in the study sample, reflecting the slightly different organisational structure for critical care at the two sites. However, collating the data showed that in Hospital A, 142/173 participants (82.1%) and in Hospital B 212/248 (85.5%) were from similar or related specialities in both locations i.e. Medical CCU/Adult CCU, CCU, Cardiac surgery CU/Cardiovascular ICU, Paediatric ICU, and Neonatal ICU, so suggesting that recruitment from the two sites was broadly comparable. Considering the aims of this study, participants from the two hospitals were therefore aggregated; there was no intention to compare the two hospitals.

In order to increase statistical power in the analyses a decision was also taken to pool the data across specialities, as well as across the sites, to generate a large sample size. This meant collation of data from adult care mixed with paediatric and neonatal care settings. Clinically these are very different as far as specialist care is concerned, and for paediatric and neonatal care nurses facing child death is a particular source of high stress (section 3.8.2). However, the survey tools used are concerned with issues of the work environment, not details of practice, and they cover generic aspects of the intensive care work which are recognisable in all ICU settings (e.g. shift pattern, working hours, dealing with death, conflict with colleagues or relative). The intention was not to compare specialities and participants from paediatric and neonatal ICUs represented just 6.9% of the overall total. Nevertheless this is a potential weakness of this thesis.

Participant profile

Nurses' grades, gender, marital status, education level and years of ICU experience in the KSA were collected as baseline data. The demographics of the sample are presented in Table 11.

Table 11: Sample Characteristics by Demographic Variables (N= 421)

Demographic	Category	N=421	%
Gender	Female	330	78.4
	Male	91	21.6
Grade	Junior Nurse (II & III)	191	45.4
	Senior Nurse (I)	205	48.7
	Charge Nurse	25	5.9
Marital Status	Single	159	37.8
	Married	262	62.2
Education level	Diploma	148	35.2
	Batchelor	259	61.5
	Masters	14	3.3
ICU experience in KSA	1 - 5 years	176	41.8
	6 - 10 years	79	18.8
	> 10 years	166	39.4
Shift pattern	Rotating (Day and Night)	412	97.7
	Early (07:00 - 16:00)	9	2.3
Cultural Category (Nationality)*	A	9	2.1
	B	18	4.27
	M	83	19.7
	D	311	73.87
Patient:Nurse ratio	1:1	318	75.5
	2:1	77	18.2
	>2:1	24	5.7

* A = North American; B = Western and South African; M = Middle Eastern; D = Philippines

The final research sample therefore included of 421 participants, the majority of whom (n= 330) were female (78.4%) and 21.6% were male (n= 91). Almost half of the sample, 48.7%, were graded as senior or Staff Nurse I (n= 205), followed by 45.4 % who were graded as junior staff nurse grades II & III (n= 191). The smallest group (5.9%) were those were graded as Charge Nurse (n= 25). The majority of the participants were married; 62.2% (n= 262) while 36.8% (n= 159) were single. On average, more than half of the nurses, 61.5% (n= 259), were educated to bachelor's degree level whilst 35.2% (n= 148) were educated to diploma level and 3.3% (n= 14) had attained post-graduate degrees. Nurses' years of experience or service working in the KSA were also recorded; 41.8% (n=176) had one to five years' experience in KSA, 39.4% (n=166) had between six and ten years and 18.8% (n=79) had more than ten years of experience; the median category therefore was '6-10years'. Most of the nurses, 97.7%, worked in rotating shifts between day and night (n= 412) and the remaining 2.3% worked fixed early shifts (n= 9).

The ethical committee at one of the study hospitals had stipulated that the nationality of the participants should not be disclosed but it was agreed to highlight in the thesis the cultural category to which the participants belonged, which reflected the region in the world from whence they came. The majority of participants, 73.8% (n= 311), were from category D (Philippines); 19.7% (n= 83) were category M (Middle East); 4.2% (n=18) were category B (Western and S Africa) and 2.1% (n= 9) were category A (North America). The ratios of patients: nurse in this study were reported as 1:1 by 75.5% (n= 318) of participants, 2:1 by 18.2% (n= 77), and greater than 2:1 by 5.7% (n=24) .

6.2.2 Normal distribution of data

After averaging the items for each factor they were examined to identify if the overall average results for the sample followed a normal distribution, that is, if averages for all participants were likely to be close to the overall population average, and had few extreme scores. In doing so, the results indicated that all the factors followed a normal distribution as can be seen in the histograms below and in Table 12.

Firstly, the scale data ranges were incorporated within ± 2 standard deviations, so supporting a normal distribution (George & Mallery, 2010). Secondly, Table 12 also shows coefficients for skewness and kurtosis, provided by SPSS. Skewness relates to likelihood of the distribution of the mean being skewed either towards the left or right of the mid-point of the data value range. Kurtosis relates to the breadth of values (the 'variance') either side of the mean where extreme values are indicative of a long 'tail' at the extremes of the distribution and hence of a likelihood of data outliers. For both parameters the coefficient value should be between +1 and -1 if data distributions are to be considered supportive of normality (George & Mallery, 2010). This held for all but 'Age'. The indication therefore was that scores from within the two survey tools (see below) were largely suitable for parametric analysis based on normality of data distribution.

Table 12: Distribution of the mean and range of scores for the main variables. The table also identifies skewness and kurtosis coefficients. See text for explanation.

	Mean	SD	Skewness	Kurtosis
Years of Experience in 'KSA	.976	.902	.047	-1.77
Age	33.97	6.801	1.448	2.610
†Satisfaction	2.10	0.58	0.426	0.527
††Stress	2.10	0.58	-0.164	0.479
††† Stress 'Frequency' (total)	2.02	0.56	0.247	0.568
†††Stress 'Intensity' (total)	2.14	0.60	-0.106	0.357
†††Stress 'Threats' (total)	2.07	0.65	-0.242	0.343
†††Stress 'Challenges' (total)	2.17	0.68	-0.114	0.230

Note:

† Overall score McCloskey/Mueller Satisfaction Scale, MMSS

†† Overall score Critical Care Nursing Stress Scale, CCNSS

††† Scores for sub-scales within the CCNSS

6.2.3 Stress level (CCNSS)

The CCNSS was used to measure nurses' levels of work-related stress. Identifying the stress level was the first objective of this study. The CCNSS is a tool comprised of 5 categories, or type, of stressor: Knowledge and skills, Physical work environment, Management, Interpersonal relations, and Patient care. Each contains a number of related items (see Table 14 for example), 40 in total. Respondents are asked to rate each item according to 4 sub-scales: Stress Frequency, Intensity, Threat and Challenge. Scores are from 0-4, with 4 relating to high stress.

Item scores were totalled and averaged for each category and sub-scale. The overall mean scores and their standard deviations for each of the 5 categories are summarised in Table 13. The following cut-off criteria for levels of stress severity were put forward by Albers, (2017) and AlZyoud, (2019) in Arabic populations and were adopted in this study for all categories and each sub-scale: based on percentiles a mean value of 0 to 1.33 = low stress; 1.34 to 2.67 = moderate stress, and above 2.68 = high stress. In Tables 14-17 each category is broken down to show the individual item scores and related average category scores according to the 4 subscales: Frequency (Table 14), Intensity (Table 15), Threat (Table 16) and Challenge (Table 17). A comparison of the category data in respect of all 4 of these sub-scales is provided in Table 18.

Sub-scale: *Stress frequency*

Mean scores for the main categories of stressors according to the sub-scale stress *frequency* are shown in (Table 13 below), ranked in ascending order as follows: Knowledge and skills (Mean = 1.89), Physical work environment (Mean = 1.96), Management (Mean = 2.16), Interpersonal relations (Mean = 2.19) and Patient care (Mean = 2.29), with overall levels of stress (Mean = 2.10).

Table 13: Mean and SD Scores for stress frequency scores within Main Stressor categories

Types of Stressors	Mean	SD	Level
Knowledge and skills	1.89	0.94	moderate
Physical work environment	1.96	0.84	moderate
Management	2.16	0.61	moderate
Inter personal relations	2.19	0.80	moderate
Patient care	2.29	0.64	moderate
STRESS Average	2.10	0.58	moderate

(+) Mean is expressed as a score on the response rate scale 0 to 4

(++) Mean (0 – 1.33 = Low; 1.34 – 2.67 = Moderate; > 2.67 = High)

Data were further explored by considering the *frequency* sub-scale scores within each of the category component items (Table 14). The indications are that overall stress levels were ‘moderate’ in most respects in the sample that is mean scores were less than 2.68, but higher than 1.33. The least stressful situations were “Precepting Students” from the Management category (M = 1.50), followed by “Lighting” from the Physical Work Environment category (M = 1.57) and “Charge Position” from Management (M = 1.63).

However, some items within the *frequency* sub-scale scored highly overall and identified ‘high’ levels of stress (M> 2.67) in respect of items within the following stressor categories:

- **Management:** ‘Inadequate Staffing’ (M = 2.89) and ‘Apathetic, Incompetent Medical Staff’ (M= 2.84)
- **Patient Care:** ‘Unnecessary Prolongation of Life’ (M = 2.88) and ‘Responsibility and Decision Making’ (M = 2.85)
- **Interpersonal Relationships:** ‘Lack of Respect from Physicians’ (M = 2.71)

Scores from all the other subscales indicated ‘moderate’ stress levels, i.e. mean scores were less than 2.67, but higher than 1.33.

Table 14: Mean and SD Scores for items and categories of stress Frequency within the CCNSS, ranked for each category according to item mean.

Variables of Nurse Job stress - Frequency	n = 421	
	M	S.D.
Management		
Inadequate staffing	2.89	1.22
Apathetic, incompetent medical staff	2.84	1.33
Apathetic, incompetent nursing staff	2.01	1.10
Precepting students	1.50	1.17
Emergencies, transfer, admission	2.45	1.10
Unavailability of physicians	1.98	1.22
Shift, scheduling	2.28	1.52
Interruptions, paperwork	2.43	1.11
Patients not needing ICU	2.03	1.21
Charge position	1.63	1.30
Floating out of unit	2.06	1.19
Lack of continuity in patient assignment	1.87	1.23
Total	2.16	0.62
Interpersonal relationships		
Personality conflicts	2.56	1.53
Disagreement with MDTs re patient treatment	2.59	1.43
Unresponsive nursing leadership	1.91	1.23
Lack of respect from physicians	2.71	1.51
Lack of teamwork among staff	1.89	1.24
Communication problems	2.27	1.14
Lack of teamwork with other departments, arrests	2.00	1.18
Total	2.05	0.84
Patient care		
Emergencies, arrests	2.35	1.09
Unnecessary prolongation of life	2.88	1.23
Critical, unstable patients	2.53	1.07
Death of 'special' patients	1.98	1.06
Inability to meet patients' needs	1.88	1.07
Inability to meet family meets	1.88	1.17
Responsibility, decision making	2.85	1.33
Chronic patients	2.38	1.17
Uncooperative patients	2.60	1.16
Routine procedures	2.04	1.30
Total	2.34	0.67
Knowledge and skills		
Inadequate knowledge	1.90	1.19
Unfamiliar equipment	1.84	1.11
Lack of experience and skills	1.74	1.22
Unfamiliar situations	1.91	1.15
Inadequate continuing education	1.92	1.20
Total	1.86	0.93
Physical work environment		
Insufficient/malfunction equipment	1.97	1.09
Work space	1.87	1.14
Noise	2.15	1.21
General work environment	1.98	1.11
Too many people	2.30	1.22
Lighting	1.53	1.21
Total	1.97	0.85

M= mean, SD = standard deviation.

Sub-scale: *Stress intensity*

Likewise, Table 15 presents the nurses' responses to the questions on the *Intensity* sub-scale. The indications are that overall stress levels were generally 'moderate' in this category. The least stressful situations were the same as those shown for *Frequency* in Table 13, being "Precepting Students" from the Management category (M = 1.41), followed by "Lighting" from the Physical Work Environment category (M = 1.47), and "Charge Position" from Management (M = 1.71).

However, more detailed exploration of the subscales identified some overlap with those from the *Frequency* component, but more restricted, with 'high' levels of stress (M > 2.67) in respect of the following items:

- Management: 'Inadequate Staffing' (M = 2.86) and 'Apathetic, Incompetent Medical Staff' (M = 2.82)
- Patient Care: 'Responsibility and Decision Making' (M = 2.71)

Scores from all the other subscales indicated 'moderate' stress levels, i.e. mean scores were less than 2.67, but higher than 1.33.

Table 15: Mean and SD Scores for items and categories within the stress Intensity sub-scale of the CCNSS, ranked according to item means in each category.

Variables of Nurse Job Stress - Intensity	n =421	
	M	S.D.
Management		
Inadequate staffing	2.86	1.30
Apathetic, incompetent medical staff	2.82	1.23
Apathetic, incompetent nursing staff	2.37	1.26
Precepting students	1.41	1.20
Emergencies, transfer, admission	2.05	1.18
Unavailability of physicians	2.24	1.28
Shift, scheduling	1.78	1.28
Interruptions, paper work	2.24	1.12
Patients not needing ICU	1.78	1.15
Charge position	1.71	1.32
Floating out of unit	2.11	1.28
Lack of continuity in patient assignment	1.74	1.23
Total	2.08	0.68
Interpersonal relationships		
Personality conflicts	2.31	1.47
Disagreement with MDTs re patient treatment	2.49	1.37
Unresponsive nursing leadership	1.96	1.28
Lack of respect from physicians	2.52	1.47
Lack of teamwork among staff	1.85	1.27
Communication problems	2.24	1.24
Lack of teamwork with other departments, arrests	1.91	1.19
Total	2.18	0.87
Patient care		
Emergencies, arrests	2.28	1.15
Unnecessary prolongation of life	2.54	1.21
Critical, unstable patients	2.34	1.19
Death of 'special' patients	1.97	1.17
Inability to meet patients' needs	1.88	1.16
Inability to meet family meets	1.86	1.18
Responsibility, decision making	2.71	1.23
Chronic patients	2.29	1.24
Uncooperative patients	2.57	1.19
Routine procedures	1.85	1.27
Total	2.23	0.72
Knowledge and skills		
Inadequate knowledge	1.97	1.22
Unfamiliar equipment	1.90	1.17
Lack of experience and skills	1.78	1.25
Unfamiliar situations	2.03	1.17
Inadequate continuing education	2.02	1.17
Total	1.94	0.96
Physical work environment		
Insufficient/malfunction equipment	2.13	1.18
Work space	1.91	1.17
Noise	2.04	1.23
General work environment	1.87	1.11
Too many people	2.14	1.28
Lighting	1.47	1.24
Total	1.93	0.90

M = mean, SD = standard deviation.

Table 16: Mean and SD Scores for stress intensity scores within Main Stressor Categories

Types of Stressors	Mean	SD	Level
Knowledge and skills	1.94	0.90	moderate
Physical work environment	1.93	0.84	moderate
Management	2.08	0.68	moderate
Inter personal relations	2.18	0.87	moderate
Patient care	2.23	0.72	moderate
STRESS Average	2.06	0.80	moderate

(+) Mean is expressed as a score on the response rate scale 0 to 4

(++) Mean (0 – 1.33 = Low; 1.34 – 2.67 = Moderate; > 2.67 = High)

Table 17 presents the nurses' responses to the questions on the *Threats* component of job stress. Ranking outcomes were much the same as *Intensity* in Table 15. The indications are that overall stress levels were 'moderate' for this category in this sample, the least stressful situations being "Precepting Students" from the Management category (M = 1.41), followed by "Lighting" from the Physical Work Environment category (M = 1.47) and "Charge Position" from Management (M = 1.71).

However, more detailed exploration of the subscales identified 'high' levels of stress (M> 2.67) in respect of the following stressors:

- **Management:** 'Inadequate staffing' (M = 2.87) and 'Apathetic, Incompetent Medical Staff' (M = 2.73)
- **Patient Care:** 'Responsibility and Decision Making' (M = 2.74)

Scores from all the other subscales indicated 'moderate' stress levels, i.e. mean scores were less than 2.67, but higher than 1.33.

Table 17: Mean and SD Scores for items and categories of stress Threat within the CCNSS, ranked according to item means in each category

Variables of Nurse Job Stress - Threats	n =421	
	M	S.D.
Management		
Inadequate staffing	2.87	1.26
Apathetic, incompetent medical staff	2.73	1.33
Apathetic, incompetent nursing staff	2.37	1.26
Precepting students	1.41	1.20
Emergencies, transfer, admission	2.05	1.18
Unavailability of physicians	2.24	1.28
Shift, scheduling	1.77	1.28
Interruptions, paper work	2.24	1.12
Patients not needing ICU	1.78	1.15
Charge position	1.71	1.32
Floating out of unit	2.11	1.28
Lack of continuity in patient assignment	1.74	1.23
Total	2.00	0.68
Interpersonal relationships		
Personality conflicts	2.35	1.53
Disagreement with MDTs re patient treatment	2.59	1.06
Unresponsive nursing leadership	1.96	1.28
Lack of respect from physicians	2.54	1.51
Lack of teamwork among staff	1.86	1.26
Communication problems	2.24	1.24
Lack of teamwork with other departments, arrests	1.91	1.19
Total	1.96	0.88
Patient care		
Emergencies, arrests	2.28	1.15
Unnecessary prolongation of life	2.54	1.23
Critical, unstable patients	2.34	1.19
Death of 'special' patients	1.97	1.17
Inability to meet patients' needs	1.88	1.16
Inability to meet family meets	1.86	1.18
Responsibility, decision making	2.74	1.28
Chronic patients	2.29	1.24
Uncooperative patients	2.57	1.19
Routine procedures	1.85	1.27
Total	2.16	0.74
Knowledge and skills		
Inadequate knowledge	1.97	1.22
Unfamiliar equipment	1.90	1.17
Lack of experience and skills	1.78	1.25
Unfamiliar situations	2.03	1.17
Inadequate continuing education	2.02	1.17
Total	1.94	0.96
Physical work environment		
Insufficient/malfunction equipment	2.13	1.18
Work space	1.91	1.17
Noise	2.05	1.23
General work environment	1.87	1.11
Too many people	2.14	1.28
Lighting	1.47	1.24
Total	1.93	0.90

M= mean, SD = standard deviation.

Table 18: Mean and SD Scores for threat scores within Main Stressor Categories

Types of Stressors	Mean	SD	Level
Physical work environment	1.93	0.90	moderate
Inter personal relations	1.96	0.88	moderate
Knowledge and skills	1.96	0.94	moderate
Management	2.0	0.68	moderate
Patient care	2.17	0.64	moderate
STRESS Average	2.00	0.80	moderate

(+) Mean is expressed as a score on the response rate scale 0 to 4

(++) Mean (0 – 1.33 = Low; 1.34 – 2.67 = Moderate; > 2.67 = High)

Table 19 presents the nurses' responses to the questions on the Challenges category of job stress. Ranked outcomes differed from the previous categories. Thus although the indications are that overall stress levels were also 'moderate' in the sample, and the least stressful situation was "Lighting" from the Physical Work Environment category (M = 1.55), followed by "Precepting Students" from the Management category (1.74), the lowest scoring item from Management (M = 1.85) was "Shifts, Scheduling".

More detailed exploration of the subscale identified 'high' levels of stress (M > 2.67) in respect of just one item:

- **Management:** 'Inadequate Staffing' (M = 2.71)

Scores from all the other subscales indicated 'moderate' stress levels, i.e. mean scores were less than 2.67, but higher than 1.33.

Table 19: Mean and SD Scores for items and categories for the stress Challenges sub-scale within the CCNSS, ranked according to item means in each category.

Variables of Nurse Job Stress - Challenges	n =421	
	M	S.D.
Management		
Inadequate staffing	2.71	1.23
Apathetic, incompetent medical staff	2.57	1.07
Apathetic, incompetent nursing staff	2.49	1.18
Precepting students	1.74	1.32
Emergencies, transfer, admission	2.43	1.19
Unavailability of physicians	2.29	1.27
Shift, scheduling	1.85	1.34
Interruptions, paper work	2.30	1.14
Patients not needing ICU	1.99	1.24
Charge position	2.02	1.43
Floating out of unit	2.37	1.35
Lack of continuity in patient assignment	1.91	1.26
Total	2.20	0.68
Interpersonal relationships		
Personality conflicts	2.21	1.34
Disagreement with MDTs re patient treatment	2.23	1.25
Unresponsive nursing leadership	2.02	1.25
Lack of respect from physicians	2.33	1.35
Lack of teamwork among staff	2.01	1.33
Communication problems	2.33	1.26
Lack of teamwork with other departments, arrests	2.01	1.24
Total	2.16	0.87
Patient care		
Emergencies, arrests	2.48	1.14
Unnecessary prolongation of life	2.45	1.19
Critical, unstable patients	2.03	1.09
Death of 'special' patients	2.05	1.18
Inability to meet patients' needs	2.02	1.16
Inability to meet family meets	1.97	1.23
Responsibility, decision making	2.62	1.14
Chronic patients	2.30	1.28
Uncooperative patients	2.63	1.15
Routine procedures	2.06	1.34
Total	2.33	0.73
Knowledge and skills		
Inadequate knowledge	2.18	1.32
Unfamiliar equipment	2.17	1.23
Lack of experience and skills	1.99	1.34
Unfamiliar situations	2.18	1.23
Inadequate continuing education	2.15	1.24
Total	2.13	1.04
Physical work environment		
Insufficient/malfunction equipment	2.22	1.25
Work space	1.97	1.23
Noise	2.02	1.27
General work environment	2.03	1.23
Too many people	2.29	1.29
Lighting	1.55	1.29
Total	2.01	0.96

M = mean, SD = standard deviation.

Table 20: Mean and SD Scores for challenge scores within Main Stressor Categories

Types of Stressors	Mean	SD	Level
Inter personal relations	1.96	0.88	moderate
Physical work environment	2.01	0.96	moderate
Knowledge and skills	2.13	1.04	moderate
Management	2.2	0.68	moderate
Patient care	2.33	0.73	moderate
STRESS Average	2.12	0.85	moderate

(+) Mean is expressed as a score on the response rate scale 0 to 4

(++) Mean (0 – 1.33 = Low; 1.34 – 2.67 = Moderate; > 2.67 = High)

Table 21 summarises the mean and standard deviations with the relative severity index for the mean scores of the four stress sub-scales (stress frequency, stress intensity, threats and challenges) in relation to total scores for main categories of sources of job stress. The results indicated a relative level of moderate stress overall. However, as noted in the previous narrative there was variability between results for some component items within the categories and the sub-scales and findings identified that means for sources of high stress (according to threshold criteria) were largely consistent in the four subscales, particularly in respect of: 1) *Management*, including ‘shortages of staff’ and ‘incompetent staff’; 2) *Interpersonal Relations with Physicians*, including ‘conflicts’; and 3) *Patient Care*, which mainly included ‘decision making’, ‘dealing with emergencies and admissions’ and ‘unnecessary prolongation of life’. Possible reasons for these stressors are explored more deeply in Stage 2 of the data collection and analysis and are presented in Chapter Seven.

Table 21: Summary of data from Tables 13-20 to show mean values for stress frequency, intensity, threats and challenges in relation to broader work categories in the CCNSS

	Stress Frequency	Stress Intensity	Threats	Challenges	Average	Level
Management	2.16	2.08	2.24	2.20	2.17	Moderate
Inter-personal Relationships	2.28	2.18	2.14	2.16	2.19	Moderate
Patient Care	2.34	2.23	2.26	2.33	2.29	Moderate
Knowledge and Skills	1.86	1.94	1.94	1.82	1.89	Moderate
Physical Work Environment	1.97	1.93	1.93	2.01	1.96	Moderate
Total Stress	2.12	2.07	2.10	2.11	2.1	Moderate

mean (0 – 1.33 = Low; 1.34 – 2.67 = Moderate; and > 2.67 = High)

To further answer the research objective in respect of assessing the general level of the nurses' work-related stress, an average score for the whole CCNSS was calculated by adding together the scores for all of the job stress components and then dividing by the total number of items as some items were included in each subscale. The individual tables (13-21) had indicated overall 'moderate' levels of stress regarding the four components and the resulting overall mean value of 2.10 also indicated that in general critical care nurses experienced 'moderate' levels of stress in their jobs within the selected two hospitals, according to published threshold scores (Albers, 2017; AlZyoud, 2019).

However, as noted above (Tables 13-21) there was variability between scores for some component items within the subscales/categories that suggested some individual items scored as high stress (according to threshold criteria) across some categories, particularly in respect of: 1) *Management*, including 'shortages of staff' and 'incompetent staff'; 2) *Interpersonal Relations with Physicians*, including 'conflicts'; and 3) *Patient Care*, which mainly included 'decision making', 'dealing with emergencies and admissions' and 'unnecessary prolongation of life'. Possible reasons for these stressors are explored more deeply in Stage 2 of the data collection and analysis and are presented in Chapter Seven.

Demographic influences

For further exploration of stress in relation to other demographical details, the following inferential statistical tests were applied according to normality of the data distributions (see earlier):

- One way Anova with stress was used to examine for difference in stress scores based on the demographic variance that had more than two categories, such as that for 'level of education', 'grade' and 'patient:nurse ratio'.
- Independent t-test for differences in stress scores based on gender, marital status, and shift patterns.
- Pearson correlation for correlative analysis of stress scores against total length of stay in in ITU.

As shown in Table 22 the ANOVA indicated a statistically significant relationship between the demographic variable 'level of education' that indicates nurses with higher education qualification have higher stress levels ($p=0,002$). The post-hoc Bonferroni test that provides a correction when comparing multiple variables showed that participants with

'bachelor' qualification had statistically and significantly higher mean stress in all sub-scales compared to a 'diploma' level of education ($p < 0.001 - 0.029$).

The results of the ANOVA tests showed no significant relationship between the demographic variables of 'years of experience' ($p = .557$; table 20) and participants 'grade' ($p = .459$; tables 23 and 24).

Table 22: Differences in mean Between Stressor Related sub-scales and Education Level

Ranks				
	Education Level	N	Mean	Significance of differences
Stressor Total	Diploma	148	1.97	P=0.002
	Batchelor	259	2.19	
	Masters	14	2.06	
	Total	421	2.11	
Stress 'Frequency' (total)	Diploma	148	1.92	P=0.029
	Batchelor	259	2.07	
	Masters	14	1.94	
	Total	421	2.02	
Stress 'Intensity' (total)	Diploma	148	2.00	P<0.001
	Batchelor	259	2.21	
	Masters	14	2.11	
	Total	421	2.14	
Stress 'Threats' (total)	Diploma	148	1.91	P<0.001
	Batchelor	259	2.17	
	Masters	14	2.00	
	Total	421	2.07	
Stress 'Challenges' (total)	Diploma	148	2.02	P=0.004
	Batchelor	259	2.25	
	Masters	14	2.11	
	Total	421	2.16	

Table 23: Differences (ANOVA) in mean Between Stressor Related Measures and Years of Experience in KSA. All tests were not significant.

Ranks				
	ICU Experience in KSA	N	Mean	Significance of Differences
Stressor All sub-scales, Total	1 - 5 years	176	2.13	P=0.557
	6 - 10 years	79	2.06	
	> 10 years	166	2.10	
	Total	421	2.11	
Stress 'Frequency' (total)	1 - 5 years	176	2.02	P=0.566
	6 - 10 years	79	1.98	
	> 10 years	166	2.03	
	Total	421	2.02	
Stress 'Intensity' (total)	1 - 5 years	176	2.16	P=0.629
	6 - 10 years	79	2.10	
	> 10 years	166	2.13	
	Total	421	2.14	
Stress Threat (total)	1 - 5 years	176	2.10	P=0.507
	6 - 10 years	79	2.01	
	> 10 years	166	2.07	
	Total	421	2.07	
Stress 'Challenge' (total)	1 - 5 years	176	2.21	P=0.564
	6 - 10 years	79	2.12	
	> 10 years	166	2.13	
	Total	421	2.16	

Table 24: Differences in mean Scores between Stressor Related Measures and Participants' Grade. All tests were not significant.

	Grade	N	Mean	Significance of Differences
Stressor Total	Junior Nurse	191	2.13	P=0.495
	Senior Nurse	205	2.09	
	Charge Nurse	25	2.05	
	Total	421	2.11	
Stress 'Frequency' (total)	Junior Nurse	191	2.01	P=0.060
	Senior Nurse	205	2.05	
	Charge Nurse	25	1.78	
	Total	421	2.02	
Stress 'Intensity' (total)	Junior Nurse	191	2.16	P=0.441
	Senior Nurse	205	2.13	
	Charge Nurse	25	2.03	
	Total	421	2.14	
Stress 'Threat' (total)	Junior Nurse	191	2.10	P=0.433
	Senior Nurse	205	2.05	
	Charge Nurse	25	2.08	
	Total	421	2.0755	
Stress 'Challenge' (total)	Junior Nurse	191	2.19	P=0.54
	Senior Nurse	205	2.13	
	Charge Nurse	25	2.17	
	Total	421	2.16	

Further t-test analysis was used to test the relationship between the stress-subscale and total stress and demographic variables of 'gender' (table 25), 'shift pattern', 'marital status' and 'patient: nurse ratio'. The results showed that there is significant relationship between gender and total stress; male participants had a significantly higher mean score of total stress compared to those who are female ($p=0.011$). This was most evident in three of the sub-scales: stress intensity ($p=0.014$), stress threat ($p=0.0125$), and stress challenge ($p=0.095$). However, there was no significant difference in relation to stress frequency ($P=0.171$).

Table 25 Differences in mean (t- test) between stress scores related to 'gender '. Significant differences are shown in boldface.

Gender		N	Mean	Std. Deviation	Significance of Differences
Stress 'Frequency'	female	330	1.99	.543	P= 0.171
	male	91	2.10	.576	
Stress 'Intensity'	female	330	2.10	.575	P= 0.014
	male	91	2.28	.611	
Stress 'Threat'	female	330	2.03	.623	P= 0.0125
	male	91	2.23	.659	
Stress 'Challenge'	female	330	2.07	.655	P= 0.0095
	male	91	2.33	.693	
Stress total	female	330	2.08	.565	P= 0.011
	male	91	2.26	.616	

In contrast, the analysis found no evidence for significant differences in any of the sub-scales relating to 'shift pattern' (p=.806; Table 26), 'marital status' (p= .405, Table 27) or 'patient: nurse ratio' (p= .306; Table 28).

Table 26 Differences in mean scores (t- test) between stress and shift pattern. No differences were significant.

Shift pattern		N	Mean	Std. Deviation	Significance of Differences
Stress'Frequency'	rotation	367	2.01	.506	P=0 .581
	early	51	2.06	.573	
Stress'Intensity'	rotation	367	2.14	.503	P= 0.846
	early	51	2.15	.612	
Stress'Threat'	rotation	367	2.07	.613	P=0 .959
	early	51	2.02	.654	
Stress'Challenge'	rotation	367	2.16	.580	P= 0.775
	early	51	2.19	.696	
Stress total	rotation	367	2.13	.503	P= 0.806
	Early	51	2.10	.612	

Table 27 Differences in mean (t- test) between stress and marital status. No differences were significant.

Marital status		N	Mean	Std. Deviation	Significance of Differences
Stress total	single	159	2.15	.565	P= .405
	Married	262	2.07	.616	
Stress 'frequency'	single	159	2.04	.543	P= .487
	Married	262	2.00	.611	
Stress 'intensity'	single	159	2.19	.575	P= .153
	Married	262	2.10	.611	
Stress 'threat'	single	159	2.14	.623	P= .081
	Married	262	2.03	.659	
Stress 'challenge'	single	159	2.23	.655	P= .089
	Married	262	2.16	.693	

Table 28 Differences in mean scores (t- test) between stress and nursing ratio. No differences were significant.

Nurse ratio		N	Mean	Std. Deviation	Significance of Differences
Stress 'frequency'	1:1	107	1.99	.616	P= .670
	2:1	314	2.02	.545	
Stress 'intensity'	1:1	107	2.07	.669	P= .318
	2:1	314	2.16	.572	
Stress 'threat'	1:1	107	1.98	.734	P= .177
	2:1	314	2.10	.613	
Stress 'Challenge'	1:1	107	2.10	.767	P= .475
	2:1	314	2.18	.648	
Stress total	1:1	107	2.05	.661	P= .306
	2:1	314	2.12	.565	

A possible relationship between stress and participant 'Age' (see table 29) was explored using the Pearson Product-Moment Correlation test (r). The analysis showed that there were no significant correlations between Age and the stress sub-scales or total stress. In undertaking this analysis it also identified strong correlations between the stress sub-scale scores; that with total stress might therefore be anticipated since those data were a composite of the sub-scales

Table 29: Bivariate correlations (Pearson r) between the stress sub-scales of frequency, intensity, threat, challenge and total stress and participants' age. Significant correlations are shown boldfaced.

	Age	Stress Frequency (Total)	Stress Intensity (Total)	Stress Threat (Total)	Stress Challenge (Total)	Stressor Total
Age Pearson r Probability, p sample n	1 421	.086 .077 421	.043 .384 421	.071 .145 421	.074 .127 421	.075 .125 421
Stress Frequency (Total) r Probability, sample n		1 421	0.883 0.000 421	0.777 0.000 421	0.744 0.000 421	0.208 0.000 421
Stress Intensity (Total) r Probability, sample n			1 421	0.911 0.000 421.8	0.862 0.000 421	0.870 0.000 421
Stress Threat (Total) r Probability, sample n				1 421	0.895 0.000 421	0.950 0.000 421
Stress (Challenge (Total) r Probability, sample n					1 421	0.960 0.000 421
Stressor Total r Probability, sample n						1 421

Summary of the CCNSS outcomes.

- Nurses generally demonstrated a moderate level of job stress on all four subscales of the CCNSS (frequency, intensity, threat and challenge) but closer examination identified some items that met published criteria for high stress.
- All four subscales identified 'Inadequate staffing' as a main source of stress, three subscales also identified 'Apathetic and incompetent medical staff' and 'Responsibility and decision making', as the main sources of stress. The *Frequency* stress subscale also identified 'Lack of respect from physicians', and 'Unnecessary prolongation of life' as further sources of stress.
- All four stress sub-scales (frequency, intensity, threat, challenge) were inter-correlated.
-

Of demographic variables,

- 'Level of education' was found to be a significant factor in total stress score,
 - Nurses with a Bachelor degree were likely to score more highly on stress

6.2.4 Nurses' Job Satisfaction

The MMSS was used to measure the job satisfaction of nurses. Higher scores represent higher perceived satisfaction. Values were interpreted according to published criteria for satisfaction thresholds (Damayanthi et al, 2014): 'Low satisfaction' (1 to 2.33), 'Medium satisfaction' (2.34 to 3.67) and 'High satisfaction' (3.68 and above). On that basis, scores of subscales of the tool were ranked in ascending order (Table 30) ranging from 'Extrinsic reward' (Mean = 2.31) to 'Control and responsibility' (M = 3.37) indicating on average low-moderate satisfaction for all sub-scale categories. To answer the research objective relating to the general level of nurses' job satisfaction, an average score for job satisfaction scale was calculated by adding together the scores for all sub-scales of the MMS) and then dividing by the total number of sub-scales. The resulting figure of 2.94 indicates that intensive care nurses in this study overall are moderately satisfied with their jobs.

Table 30: Means and Standard Deviations and the Relative Index for the main dimensions of the MMSS

Satisfaction sub-scale	Mean	SD	Level (++)
Extrinsic rewards	2.30	0.68	Low
Balance of family and work	2.36	0.79	Moderate
Co-workers	2.78	0.77	Moderate
Professional opportunities	2.97	0.80	Moderate
Praise and recognition	3.07	0.73	Moderate
Scheduling	3.30	0.79	Moderate
Interaction opportunities	3.33	0.73	Moderate
Control and responsibility	3.37	0.79	Moderate
Overall satisfaction	2.94	0.52	Moderate

(++): mean (1 – 2.33 = low; 2.34 – 3.67 = moderate and > 3.67 high)

Looking more closely at items within the sub-scales of satisfaction, shown in Table 31, no mean scores were in the ‘High satisfaction’ category (i.e. $M > 3.67$), but most identified that nurses were “moderately satisfied” ($M = 2.34$ to 3.67).

Comparing the sub-scales rated as being of low job satisfaction, nurses expressed lowest levels of satisfaction with regard to

- ‘Extrinsic rewards’ (Mean = 2.30), which included items related to their Salary ($M = 1.91$), and ‘Vacation’ ($M = 2.32$) both of which were within the ‘low’ criteria, above.
- The item ‘Maternity leave’ within the category ‘Balance’ also scored in the ‘low’ range ($M = 2.25$).

These are interesting results that were investigated further during Stage 2 of the data collection and analysis in order to explore the reasons why nurses are not satisfied in relation to these variables

Table 31: Mean and Standard Deviation Values for dimensions of the McCloskey/Mueller Satisfaction Survey, and subscales within them

Variables of Nursing Job Satisfaction (MMSS)	n= 421	
Extrinsic Rewards	Mean	SD
1. Salary	1.91	0.73
2. Vacation	2.32	1.13
3. Benefits package	2.68	1.18
Scheduling		
4. Hours that you work	3.60	0.96
5. Flexibility in scheduling your hours	3.48	1.03
6. Opportunity to work straight days	3.30	1.08
8. Weekends off per month	3.59	1.10
9. Flexibility in scheduling your weekends off	3.36	1.06
10. Compensation for working weekends	2.48	1.25
Balance		
7. Opportunity for part-time work	2.65	1.17
11 Maternity leave	2.25	1.14
12 Child care facilities	2.41	1.12
Co-workers		
14 Your nursing peers	3.66	0.96
15 The physicians you work with	3.31	1.0
Interaction opportunities		
16 The delivery of care method used	3.54	0.92
17 Opportunities for social contact at work	3.20	0.90
18 Opportunities for social contact with colleagues after work	3.26	0.98
19 Opportunities to interact professionally with other disciplines	3.31	0.86
Professional Opportunities		
20 Opportunities to interact with faculty	2.84	0.99
21 Opportunities to belong to committees	3.07	0.94
27 Opportunities in nursing research	3.02	1.02
28 Opportunities to write & publish	2.94	1.02
Praise and Recognition		
13 Your immediate supervisor	2.8	0.67
24 Recognition from work superiors	3.31	1.11
25 Recognition from work peers	3.39	0.87
26 Amount of encouragement and positive feedback	3.16	1.07
Control and Responsibility		
22 Control over what goes on in work setting	3.34	0.92
23 Opportunities for career advancement	3.29	1.05
29 Your amount of responsibility	3.53	0.98
30 Your control over work conditions	3.47	1.00
31 Your participation in organizational decision making	3.23	1.01

(+) mean is expressed as a score on the response rate scale 1 to 5

(++): mean (1 – 2.33 = low; 2.34 – 3.67 = moderate and > 3.67 high)

For further exploration of job satisfaction, possible differences in relation to demographical factors were evaluated, again by applying the following statistical tests:

- One way ANOVA with 'satisfaction' was used to examine the difference in satisfaction scores based on the demographic variance that had more than two categories such as 'Level of education', 'Grade' and 'Nurse:patient' ratio.
- t-test (for differences in satisfaction scores based on 'Gender', 'Marital status', and 'Shift patterns')
- Pearson correlation (for correlative analysis of satisfaction against 'Total length of stay in ITU').

The ANOVA results showed no significant differences between demographic variables and satisfaction though 'Level of education' (Table 32; $p = .054$), 'Years of experience in KSA' (Table 33; $p = .054$) and 'Grade' (Table 34; $p = .054$) were borderline significant at the 0.05 level of probability.

Table 32: Differences in mean Scores between Satisfaction Related Measures and Education Level

Education Level	N	Mean	Std. Deviation	Significance of Differences
diploma	148	3.02	.470	P= .054
BA	259	2.89	.557	
Master	14	2.96	.435	
Total	421	2.94	.527	

Table 33: Differences in mean Between Satisfaction Related Measures and Years of Experience in KSA

ICU Experience in KSA	N	Mean	Std. Deviation	Significance of Differences
1-5 years	176	2.92	.482	P= .054
6-10 years	79	2.94	.543	
more than 10 years	166	2.96	.566	
Total	421	2.94	.527	

Table 34: Differences in mean Between Satisfaction Related Measures and Participants' Grade.

Grade	N	Mean	Std. Deviation	Significance of Differences
Junior nurse	191	2.98	.493	P= .054
Senior nurse	205	2.89	.568	
Charge nurse	25	3.03	.384	
Total	421	2.94	.527	

As shown in Table 35, application of a t-test showed that there was a significant difference in Satisfaction scores in that married participants scored significantly higher for total satisfaction compared to those who were single (difference, $p = 0.041$). However, no significant differences were found in Satisfaction scores related to 'gender', 'shift pattern' and 'nurse: patient ratio' though the latter was borderline significant. (Tables 36, 37, 38).

Table 35 Differences in mean (t- test) between satisfaction scores related to marital status.

Marital status	N	Mean	Std. Deviation	Significance of Differences
single	159	3.01	.485	P= .04
Married	262	2.90	.548	

Table 36 Differences in mean (t- test) between satisfaction scores related to and gender

Gender	N	Mean	Std. Deviation	Significance of Differences
Male	91	2.85	.611	P= .14
Female	330	2.96	.500	

Table 37 Differences in mean (Tt test) between satisfaction scores related to and shift pattern

Shift pattern	N	Mean	Std. Deviation	Significance of Differences
Rotation	367	2.94	.465	P= .94
early	51	2.94	.538	

Table 38 Differences in mean (T- test) between satisfaction scores related to and nurse: patient ratio

Nurse ratio	N	Mean	Std. Deviation	Significance of Differences
1:1	107	3.02	.502	P= .057
1:2	314	2.91	.533	

Bivariate correlation was also undertaken to evaluate possible relationship of satisfaction against participant age (non-categorised; Table 39). This was not significant (Table 39).

Table 39: Bivariate correlations (Pearson r) between the satisfactions related measures with age

	Age	Satisfaction
Age r	-	-0.070
probability		.149
sample, n		421
Satisfaction r	-0.070	-
probability	.149	
sample, n	421	

Summary of the MMSS outcomes.

- Satisfaction generally was moderate amongst this sample of nurses.
- The exception was the category 'Extrinsic rewards' in particular related to 'Salary and 'Vacation' which were within the 'low satisfaction' criteria.
- The item 'Maternity leave' within the category 'Balance' also scored in the 'low' range.
- Married nurses were likely to score lower on satisfaction than would single nurses.

There was borderline significance ($p=0.054$) for nurses

- with a Batchelor degree,
- those with just a few years of experience in KSA, and
- those who held senior positions.

6.2.5. Integrating the stress and satisfaction outcomes.

In a final set of analyses the relationship between CCNSS (job stress) and MMSS (job satisfaction) scores were subjected to bivariate correlation analysis, using a Pearson r test. As Table 40 shows, all variables were strongly inter-correlated at the $p<0.001$ level. All stress variables were correlated in a positive direction but satisfaction was consistently and significantly negatively correlated against the stress variables,

indicating that job stress and job satisfaction had an inverse relationship. Correlations between each stress sub-scale against total stressor score are shown in Table 40 for purposes of completion; as contributors to the total stress score then significant correlations would be anticipated.

Table 40: Bivariate correlations (Pearson r) between CCNSS sub-scale scores and total MMSS satisfaction scores. The table identifies the r coefficient and probability.

Note: inter-correlation data for stress subscales are repeated here to aid comparison with their relationship to Satisfaction

	Satisfaction	Stress Frequency (Total)	Stress Intensity (Total)	Stress Threat (Total)	Stress Challenge (Total)	Stressor Total
Satisfaction Pearson r Probability p Sample n	1 421	-0.269 .000 421	-0.228 .000 421	-0.212 0.000 421	-0.154 0.002 421	-0.208 0.000 421
Stress Frequency (Total) Pearson r Probability p Sample n		1 421	0.883 .000 421	0.777 0.000 421	0.744 .000 421	-0.208 0.000 421
Stress Intensity (Total) Pearson r Probability p Sample n			1 421	0.911 0.000 421.8	0.862 .000 421	0.870 .000 421
Stress Threat (Total) Pearson r Probability p Sample n				1 421	0.895 0.000 421	0.950 0.000 421
Stress Challenge (Total) Pearson r Probability p Sample n					1 421	0.960 .000 421
Stressor (Total) Pearson r Probability p Sample n						1 421

6.2.6 Summary of Quantitative Findings

Despite numerous research studies that have reported on stress in nursing, this issue continues to be a common research topic due to its outcomes on individuals' health and organizations. In this study, intensive care nurses working in a diverse cultural setting were investigated to determine stress and satisfaction levels with the associated factors that frequently occur in the workplace. This study examined the perceived levels of work-related stress and job satisfaction amongst critical care nurses in the KSA. The participants were geographically distributed across two of the biggest hospitals in Riyadh (the capital of the KSA). The majority of the sample was married, female, and held BSc degrees and/or above. Main findings were:

- Responses to CCNSS questionnaires indicated that intensive care nurses experienced moderate levels of stress, according to published threshold scores for the criterion.
- For some stressors, participants consistently reported moderate levels of stress across the four scales (stress frequency, stress intensity, threats and challenges), including within the categories of Management, Inter-personal relations, and Patient care. The most stressful stressor was 'Inadequate staffing' (within Management). However, other sources that were indicated as highly stressful included Apathetic and incompetent medical staff (Category: Management), Lack of respect from physicians (Category: Inter-personal relations), Responsibility and decision making, (Category: Patient care), Unnecessary prolongation of life (category: Patient care) as further sources of stress (category: both Patient care)
- The results identified strong correlations between stress subscale scores (and an anticipated one with total stress as a composite of those scales).
- There was no significant relationship between perceived sources of job stress and most demographic variables including Grade of the nurses, their marital status or their Level of experience, Age, Gender or Shift patterns, but that there was a significant relationship with their Level of educational attainment favouring higher stress scores in those with a Bachelor degree .
- The results showed moderate levels of job satisfaction amongst the sample, but especially low levels of satisfaction in relation to extrinsic rewards particularly in relation to Salary and Vacation, and Balance, especially Maternity leave.

- The results demonstrated no significant relationship between the nurses' job satisfaction and their demographics.
- Scores for subscales of stress were negatively correlated with total score for job satisfaction, indicating an inverse relationship between perceived job stress and perceived job satisfaction.

The next section explores these findings further and presents the qualitative design and results elicited by the information gathered from semi-structured interviews.

6.3 Qualitative Findings

According to Borg and Gall (1989, p380), *"The qualitative approach is much more difficult to do well than quantitative research because the data collected are usually subjective and the main measurement tool for collecting data is the investigator himself."*

This section presents and critically reviews the findings of the second (qualitative) stage of this research, which comprised semi-structured interviews followed by an outline of the deductive analysis conducted according to this framework. Conducting semi-structured interviews will add to this study to generate an improved explanation and understanding of how intensive care nurses perceive job stress and satisfaction in an environmental setting that does not inspire the avoidance of the psychosocial risks.

The phenomena of work-related stress and job satisfaction amongst critical care nurses in the KSA are explored in detail to develop an inductive and comprehensive understanding of nurses' thoughts and feelings in order to provide a better understanding of the issues relating to the reported phenomena. For most of the participants interviewed English is their second language, therefore, transcripts of interviews contained grammatical mistakes. Instead of applying grammatical modifications to the transcripts that may have distorted the original intent of what the nurses wished to communicate, the transcripts have been left in their original form. Quotes of interviews that have been involved in this chapter to support the explained themes are from the original transcripts of interviews. The only modifications that have been applied are punctuation such as commas, question marks and full stops in order to facilitate readability. This supports my presentation of the nurses' descriptions while maintaining the truthfulness of the information obtained.

To provide a better understanding of what ICU nurses understood to be the reasons for work-related stress in the KSA, the researcher asked the participants to define the challenges and main stressors they faced in their work based on the results of the quantitative stage. The researcher also had taken a border approach by relating questions to the stress categories that had seemed of most concern which encouraged all the respondents to deeply explore their vision and experiences about the phenomena of work-related stress.

6.3.1 Profile of the Respondents Interviewed

Before presenting and discussing the findings of the analysis of the qualitative interviews, it is useful to present some demographic information about the nurses who were involved. This information aids understanding of the context in which the interviews were conducted and how the subsequent themes emerged from analysis of the data. The characteristics of the participants included in the sample were used as the basis for reflecting the diversity and breadth of the sample population; thus measures were taken to ensure that there were individuals from varied and diverse backgrounds and gender in the selected sample. Nineteen intensive care nurses were interviewed: 11 (58%) were female. Most (13; 68%) were single (n=13) whilst just 32% (6) were married. All were educated to bachelor degree level. The majority (53%, n=10) had between 1 and 5-years' experience whilst 6 had between 6 and 10 years of experience and 3 v had more than 10 years. The sample also took account of cultural backgrounds, over a third were from region D (see Table 27 for clarification), 42% (n=8), whilst 26% (n=5) were M category, 16% (n=3) were B and 16% (n=3) were A.

Table 41: Demographic Characteristics of the Qualitative Sample (n=19)

Demographic	Category	%
Gender	Female	58%
	Male	42%
Marital status	Single	68%
	Married	32%
Years of experience	1-5 years	53%
	5-10 years	32%
	More than 10	15%
Level of educational attainment	BCS	100%
Nationality category *	A & B Category	32%
	M & D Category	68%
Shift pattern	Rotating (Day and Night)	10.5%
	Early (07:00- 16:00)	89.5%
ICU experiences in KSA	1 - 5 years	36.9%
	6 - 10 years	52.6%
	> 10 years	10.5%

* A = North American; B = Western and South African; M = Middle Eastern; D = Philippines

Compared with the Stage 1 participants the demographic profile of interviewees was slightly proportionately higher in males, more likely to be in the A and B geographic regional categories, and more likely to be on rotating shifts. However, comparing proportions is not very helpful when numbers are low (i.e just 19 interviewees compared with 421 nurses in the survey). Most importantly, the intention was met to involve participants across the profile range identified in Stage.

Seven nurses participating in the interviews were from Hospital A, mostly from the Critical Care Unit, Cardiac Surgery Care and Paediatric Intensive Care, and twelve nurses were interviewed from Hospital B, mostly from Cardiovascular ICU, Paediatric ICU and Neuro ICU. Proportionately this was not greatly different to the survey sample derived from Hospital A where the Critical Care Unit, Paediatric Intensive Care and Surgical ICU provided most participants, but that from Hospital B provided proportionately more participants from the Critical care Unit and Adult ICU. However, diversity in the sample is evident.

6.3.2 Analysis and Qualitative Findings

Thematic analysis was applied to analyse the data generated in the interviews as it was considered most likely to meet the objectives of the research, particularly in allowing a broad exploration of the work-related stress and job satisfaction of nurses who work in intensive care units in the KSA.

In order to achieve the main aim of the qualitative interviews, the essential issues discussed with informants concerned the main stressors for critical care nurses in the KSA. Using the process of analysis that was explained and detailed previously (in Chapter Five), three main themes were identified from the interview data:

1. workload
2. lack of support and feeling undervalued
3. cultural differences

These themes were analysed in order to develop an explanation of what the main stressors are and why they resulted in job dissatisfaction. The emerging themes were arranged according to how they were embedded in the participants' views, and they were organised to provide contextual data which it is hoped, will help the reader to understand and pull together the data and information with the subsequent sections in this chapter. This process also will also allow the reader to judge the validity and trustworthiness of the conclusions that I draw from the data.

Table 42: Basic Themes and Sub-themes of the Main Stressors

Main Stressors	Basic themes	Sub themes
Work load	<ul style="list-style-type: none"> • Short of staff • Extra duties • Extra Paperwork 	<ul style="list-style-type: none"> • Ratio • Duties of the scope of service <p>Accreditations (Joint Commission International Accreditation (JCIA), Central Board of Healthcare Institution (CBAHI))</p>
Lack of support and recognition	<ul style="list-style-type: none"> • Lack of management support • Lack of recognition and being valued 	
Culture	<ul style="list-style-type: none"> • Relationship with physician • Discrepancies in salary and packages and fairness • Discrimination 	<ul style="list-style-type: none"> • Communication skills • Nationality • Gender and nationality

6.3.2.1 Workload

A common stressor identified by participants in the interviews was the stress that resulted from workload. 'Workload stress' was defined in Section 3.8.1 as an unwillingness to come to work, with a feeling of steady pressure accompanied by general physiological, psychological, and behavioural stress symptoms (Nilufar, et al., 2009). Most of the nurses who were interviewed (13/17 participants) verbalised that they experienced high levels of stress in clinical areas because of the workload. The analysis of interview data identified three factors linked to workload related stress. These were: 'staff shortages', 'extra duties and tasks', and 'paperwork'.

These basic themes are described and explored in the following sections. In each section I will demonstrate how these factors impact and reflect on the nurses' experiences of stress, how stress could be linked to staff turnover and how stress was influenced by or impacted upon the core theme.

6.3.2.1.1 Staff Shortages

The participants' responses suggest that staff shortages were one of the main reasons for work-related stress in relation to workload. Most of the respondents felt that there was a shortage of nurses in the KSA and they considered it to be one of the main stressors and the most important reason for quitting nursing in the KSA, and sometimes for changing jobs. However, some nurses thought that the nurse:patient ratio was acceptable and found no evidence of extra workload due to staff shortages. Opinion about this seemed to depend on the type and speciality of intensive care that they work in:

"Not really, we are not well staffed and sometimes you feel that you need to have some extra staff with the extra tasks we are having, and we tried to ask for overtime. But the management refuse and we manage it ourselves." (Male 4, Hospital A)

Other participants stressed:

"I have no time to take my break completely, the unit is always full and the patients here are very sick and busy, this caused me high level of stress all the times." (Female 2, Hospital A)

"I don't think we are well staffed and that plays a vital role in increasing the workload." (Male2, Hospital B)

"We're not well staffed especially with the ratio 1:2; 1:2 with critical care patients is very stressful." (Female3, Hospital B)

During the interviews, it becomes clear that staff shortages and inadequate nurse:patient ratios were the main cause of workload and stress that the nurses faced. When the researcher sought to find out the feelings and outcomes raised by this, the following statements ensued:

Nurse 1, who has total of 9 years of experience in nursing and hold bachelor's Degree in general nursing, says:

"There is a staff shortage and gap always, which I think, it is the reason why we have extra workload and that is what makes me very stressed and frustrated, and sometimes I think about leaving the KSA because of this". (Male 1, Hospital A)

This respondent's level of stress caused him to quit his job and to leave the KSA, expressing his frustration at the shortage of staff and increased workload. The

interviewee clearly linked the increase in his workload with the shortages in critical care nurses. This demonstrates that stress due to workload can be sufficiently excessive to lead to an increase in the turnover of staff within the nursing profession. As the above example also illustrates, this individual connected excessive workload with existing staff shortages.

One of the causes of excessive workload and stress for many participants, was the nurse:patient ratio. It was evident that most of the participants had experienced or were experiencing stress at some point because of the excessive workload caused by 'doubling up' Level 3 patients:

Staff Nurse 3 who has 7 years of experience says:

"We're not well staffed especially with the ratio 1:2 (i.e. 2 patients per nurse). 1:2 with critical care patients is very tiring and stressful." (Female3, Hospital A)

Staff Nurse 2 who holds a bachelor's degree and 3 years' experience as a nurse says:

"I don't think we are well staffed because of the unsafe nurse ratio for Level 3 patients and that plays a vital role in increasing the workload, which makes me stressed and exhausted." (Male2, Hospital B)

In these quotations, it seems clear that these nurses considered staff shortages, characterised by an increased patient-nurse ratio, to be one of the main reasons for their excessive workload and they highlighted their frustration and mentioned the possibility of leaving because of it. Female 3 from Hospital B and Male 2 from Hospital B stated that the patient:nurse ratio had increased which they found to be tiring and a cause of stress. The nurses here expressed their frustrations at having to nurse more than one patient at a time during a shift. They felt that this requirement created risks not only for the patients, but also for the nurses concerned. Despite this, nurses' institutions have made their own recommendations for an ideal patient:nurse ratio. Among the organizations that have made their views clear on this matter are the American Public Health Association (2005), the New Jersey Hospitals and the California's Nurses-Patient ratio (2010). The evidence obviously explains that adequate staffing and adjusted workloads are key to achieving good patient, attendant, and budgetary outcomes (Agency of Health Research and Quality, AHRQ 2012 Qureshi, SM. Et al 2019). A large study conducted in the United States reported that the higher the patient:nurse ratio, the higher were the incidences of patient mortality, nurse burnout and nurse job dissatisfaction. These results showed that an increase of the patient:nurse ratio by a factor of one increased the incidence of burnout and job dissatisfaction by 23% and 15%

respectively, while raising the patient:nurse ratio from 4:1 to 8:1 more than doubled the level of job dissatisfaction among nurses (Audit Commission 2001:3). Storch (2005, p219) highlights a surprise in the way in which this evidence is generally neglected by noting that, “there is a substantial amount of good research evidence on the relationship between nurse staffing and patient outcomes that seems to be neglected”.

Most of the nurses in this study elaborated on feelings of exhaustion due to their excessive workload and its effect on their decision to leave their nursing positions in the KSA. It is clearly documented that continuously increasing workloads and demands due to staff shortages, leads to a variety of negative outcomes including mental and physical disorders, increased sick leave and reduced performance and productivity amongst nursing staff. Most of the participants referred to an excessive workload due to shortages in nursing staff, especially when they were required to look after two Level 3 patients with all of the extra tasks and documentation that that entails. During the data collection period I noticed that extra tasks such as paperwork and documentation can take the nurses away from patients’ bedsides. Nurses are required to provide a high-quality service, over extended hours, with a large workload and within a short timeframe.

The results in this research are supported by comparable results in other research that has cited excessive workloads due to high patient:nurse ratios as the leading cause of stress and burnout in nurses. In a study that concentrated specifically on English nurse staffing ratios, Rafferty, et al. (2007) reported that those nurses in hospitals with the heaviest patient workloads such as in intensive care units were 71% more likely to face elevated levels of burnout and job dissatisfaction than nurses in hospitals with more favourable patient:nurse ratios. According to Jenkins (2004), staff shortage was the key stressor for nurses, while dealing with demanding patients was the most stressful aspect.

However, some participants did argue that the staff shortages were not stressful. The following quotation illustrates this view:

“Yes I think we are well staffed compared to the ratio I used to work before, back home” (Female 2, Hospital A)

Here the nurse contradicted many of the other respondents in claiming that there is no shortage in nursing staff in comparison to the ratio of nurses to patients in her home country. This interviewee previously used to work with a high, unrealistic and unsafe patient:nurse ratio where nurses were obliged to deal with and care for more than one Level 3 patient at a time. According to the Intensive Care Society, the nursing ratio for Level 3 patients must be one to one. In other words, the acceptance of the ratio in the KSA was related to previous experience rather than to notions of patient safety.

It was noted above that excessive workload is related to staff shortages and can result in feelings of stress and exhaustion. It seems clear from the quotations set out (above) that staff shortages are a problem for nurses in the KSA and it is a problem that has also been highlighted in many other studies, both internationally as well as in the KSA. It appears to be one of the main reasons for an increase in nurses' workload and is considered one of the key factors influencing nurses' decisions to leave intensive care nursing.

6.3.2.1.2 Extra Duties and Tasks

Thematic analysis of the qualitative data suggests that stress related workload is largely due to extra non-nursing tasks and duties, combined with poor nurse:patient ratios. Nurses felt stressed because of the poor ratio and because the non-nursing tasks that they are required to do can affect the quality of care that they provide to patients. The following are examples of data extracted for this sub-theme that are illustrative of this point:

"We have a shortage which increases the workload, especially with the extra duties for nurses, like cleaning bed areas and distributing food trays sometimes, and unneeded paperwork." (Male3, Hospital B)

"I feel exhausted and really tired with the shortage of staffing and the load of work is increased with paperwork added to our task. I feel stressed if I do not finish the work with the patient because of extra tasks. We are more engaged with the extra tasks that are not part of the job, like cleaning their rooms, equipment and preparing their meal, we don't mind feeding the patients and completing the food chart, but I don't think it's a nursing job to prepare the meal and distribute it." (Female1, Hospital A).

"I feel bad because instead of giving more time to the patient, the other way around, were giving more time to extra paperwork. Sometimes we are the ones who clean the equipment and rooms; that's not included in the job description. And I feel stressed about this because I need to take care of the patients, but I don't have enough time." (Male2, Hospital B)

"It depends on patient case and because of some extra assignment which is unnecessary we feel stressful. Like we are having a meeting every week and that meeting can stay over more 2 hours and take you again from the patients, that is time consuming" (Male 4, Hospital A)

These examples illustrate that the majority of the nurses who participated in this study felt that the increase in workload was due to extra duties and tasks required of them. Many nurses in the study reported that they often engaged in activities such as cleaning the bed spaces and rooms after patients had been discharged, preparing and distributing food instead of feeding the patients, and sometimes, translating for doctors and other healthcare staff. Tasks such as these are added to their workload whilst other nursing tasks such as oral and skin care, bedside teaching and comforting the patients, are left undone. There is strong evidence from this research to suggest that the combination of nursing and non-nursing related tasks means that there is less time for the emotional, spiritual, and psychological caring aspects of nursing, which are often considered to be the primary motivators for people entering the nursing profession in the first place. Nurses who spend more time performing extra tasks and paperwork, over and above the time that they spend with their patients, are likely to experience increased levels of work related stress and negative impacts on the standards of care and patient safety that they are able to provide.

6.3.2.1.3 Extra Paperwork and Documentation

At the start of every shift, nurses are required to document all the activities and situations that affect the patient and his or her health care and progress. Documentation provides proof of the type of care that is being provided and the response of patients to that care, and it therefore constitutes a major link between the care that is being supplied and the circumstances of the patient. Since documentation also allows those concerned to make an evaluation of the care being given, it acts as a means of communication between all those who are included in the provision of health care in a case.

Most of the participants in this study were experiencing feelings of stress because of excessive and what they viewed to be unnecessary documentation and paperwork due to the demands of accreditation such as the JCIA, CBAHI and Magnet (see below). However, they strongly believe that much of the paperwork and documentation is necessary in order to maintain these accreditations, but that this impacts negatively on their workload and the quality of care that they can provide to their patients. The following quotes are illustrative of this:

"I feel exhausted and tired, not because of bedside care but, just because of paperwork. And we don't know which one we should prioritize and with added extra workload, especially during JCIA and CBAHI accreditation; because they

required more documentation. We feel we are not patient-centred and feel we are serving the system” (Female5, Hospital A).

Other participants emphasised that:

“I feel dead and very tired because the load of work that has been increase due to paperwork and documentation that added to our task and I feel stress and depress when I’m not finish my patient work due to extra task. Some time they gave us extra number of patient and duty for that month.” (Male 7, Hospital A).

“I can’t really say that we are well staffed, and I think this is has increased the worked with the paperwork increased and we can’t complete everything on time that make you have bigger problem and then you will get blames and criticized.” (Female 6, Hospital B)

It is evident from this analysis that nurses clearly stated a lot of extra documentation is required for the Joint Commission International Accreditation (JCIA) and Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) and the Magnet recognition program. These accreditation programs require a lot of documentation to be completed within a certain timeframe. The majority of nurses interviewed highlighted the effect of the extra documentation on their work, which in turn, impacted negatively on the provision of high quality patient care and on nurses’ levels of work related stress.

It is clear from these examples that nurses are able to spend less time with their patients because of the extra documentation that they are required to complete, especially documentation that needs to be completed within a specific timeframe, as this is checked by auditors for accreditation requirements. There was a minority of participants who believed that time management played an important role in organising the nurses’ shifts. It is likely that the time needed to complete extra documentation would be taken from time that would otherwise be dedicated to patients’ care.

The implications of the nurse:patient ratio and extra documentation were also established during the discussions. One nurse felt that extra documentation became more stressful when they had to care for more than one ICU patient at the same time: here is the participant’s quotation:

“1:2 (nurse:patient) ratios is not fair because the patients in Surgical ICU is mostly heavy patient. And extra paper workload that you need to be completed due to JCIA standard and CBAHI standard with the Magnetic recognition program are time consuming. And if you did not complete the bedside and paperwork they will blame you, so we try to make sure all the documentation done and updated

before even assessing the patients' needs. And all of this because of staff shortage and that what makes me stressed.” (Male 1, Hospital A).

One of the participants felt especially stressed and unhappy about the problem of extra documentation because it was inevitable that her manager would reprimand her if she had not completed all the required paperwork. She made it clear that sometimes nurses document work that they have not actually done, which could potentially compromise patient care and outcomes for the patient, in order to avoid blame and repercussions from the managers.

“And extra paper workload that you need to complete due to JCIA standards and CBAHI standards is time consuming. In addition, if you do not complete the bedside and paperwork they will blame you. And this is because of staff shortages and it makes us stressful and sometimes we try to fill the documentation even you haven't done deep assessment clinically with patient.” (Female 6, Hospital B).

The above examples and the wider data analysis emphasise that time management for nurses plays a vital role in levels of stress related to their workload. As is clearly demonstrated in the above quotations, some nurses rely and depend on effective time management and an enhanced spirit of teamwork in dealing with any extra tasks and do not feel stress from the extra tasks and workload (the more nurses are organised and keep good time management, the less stress they are likely to experience due to workload).

“And extra paper workload that you need to be completed due to JCIA standard and CBAHI standard is time consuming. And if you did not complete the bedside and paperwork they will blame you and sometimes the family and relative blame you for spending most of your time on computer filling forms and documentations. And this is because of staff shortage and this makes us stressful.” (Male2, Hospital B).

“Documentation, I don't know who decides on the papers, but if it is possible for somebody to decide on the paperwork, I think they can really rethink and to check on the paperwork we are completing on computer system. Most of it you will find it's a repetition 2 or 3 times in another form and it's basically the same information. Why did you write it there, let's use one chart? That's why you'll find you have so many charts to write so even remembering – give me one, write everything there, I will do it and do it very nicely.” (Female 10, Hospital A)

As shown in the above examples, many participants considered extra documentation as one of the reasons for their extra workload, apart from staff shortages. They felt that most of the documentation was repetitious and took them away from direct patient care. They clearly highlighted that the extra documentation had the effect of contributing to exhaustion and tiredness that, in turn, had a negative impact on their work-related stress levels. For some, these tasks can take the nurses away from patients and so affect the quality of care provided, as they engage in tasks that could be done by cleaners, or catering staff. For other participants, these extra tasks can affect their time management and impact negatively on other nursing tasks that they are required to do. Some participants noted that extra documentation had become such an issue and concern for the patient and family that they were questioned about the amount of time they spent on computers completing the documentation.

There is no doubt that good time management can help nurses to organise their time better and reduce their workload, but it can be argued that this is dependent on the seniority of the nurses and the nature of the units as well as the type of intensive care (some units have extra healthcare assistants to help the nurses, whilst other units don't). However, nursing documentation as a stressor (for example missing and incomplete documentation) has already been documented in other research into nurse stress and burnout (Sehlen, et al., 2009).

6.3.2.2 Lack of Support and Professional Recognition

Another feeling, common amongst participants, was of a lack of support and an absence of professional recognition from management. This can be considered as one of the main stressors for intensive care nurses, who refer to the feeling of not being valued. Thematic analysis of the qualitative data revealed that most participants felt that they lacked support and professional recognition from senior members of staff and senior management in two main areas: lack of support and lack of appreciation. Examples, illustrating each of these sub-themes, are discussed below.

6.3.2.2.1 Lack of Support

The data analysis showed that nurses in critical care units in the two hospitals identified a lack of support as one of the stressors and key factors influencing decisions to leave the nursing profession in the KSA. It is therefore very important to provide adequate support to nurses. Several participants reported feelings of frustration and stress

because they did not receive the support that they believed they required. The quotations below are illustrative of this:

“One of the most stressful issues is workload; salaries issues and physicians abusing us as there is a lack of support from the nursing department and we feel that we are not supported.” (Male 1, Hospital A)

“One of my colleagues was insulted by being shouted at, in front of relatives and other MDT, by a doctor and, of course this makes us stressed, especially because there was no support from the management but only promises that make you disappointed.” (Male3, Hospital A)

As noted in the above quotations, most of the respondents felt frustrated and stressed due to having been ignored or isolated by their senior colleagues, who were often absent from day-to-day activities and did not provide them with adequate support and recognition. Some of the nurses reported incidents of assault by other healthcare professionals or relatives, at which time no support was given by managers. This caused nursing staff to feel that they were not working in a healthy or positive working environment. There is little doubt that incidents such as these could cause additional stress to the nursing staff who could feel unsafe and unprotected in their clinical area and in their workplace, especially as there are no unions, such as the Royal College of Nursing or Unison (in the UK), to support and provide advocacy for nurses. It is well documented that employers are responsible for providing healthy and safe working environments for their employees, especially when this will lead to the provision of safe and high-quality care for their patients. The frequent lack of support experienced by participants in this study caused them to feel unsupported and unsafe. This inevitably had an impact on nurses' levels of work related stress and subsequently influenced the quality of care that was provided to patients, as well as the levels of sickness amongst nursing staff.

During their interviews, some of the participants highlighted the hospital's strategy of blaming and disciplining nurses when dealing with patients' complaints. It appears that the hospitals deal seriously with complaints from patients, but don't stand up for or support the nurses when they are abused by patients or relatives:

“I feel very bad and stressed because sometimes you can't accept that kind of abuse you face from family with the lack of support from the hospital. It's bad when the hospital management investigate in case there is a complaint from the patient but they never stand up for you when any one abuse you from the patient or family.” (Female 4, Hospital A)

"It's stressful situation because the hospital has zero tolerance policy and there is lack of support from the management that the staff can't be protected by the organization with the lack of support. (Male4, Hospital A)

Participants not only seek support in professional development and education; they need support in instances of conflict with other healthcare professionals, patients and patients' relatives. They feel that they are missing effective leadership in supporting and guiding them. Other nurses reported that they are afraid to ask for help or support from colleagues or from senior managers as they feel nothing will change or happen as a result:

"Yes, I encountered one or two incidents were my colleagues working with me at night duty has been abused and that time I called the supervisor to explained it to patient by Arabic but what he has done??? Nothing. I feel stress they shouldn't be like that with no support from management side." (Female 2, Hospital A)

The analysis of the qualitative data clearly illustrates the influence and effect of leadership and the lack of support from management, in causing critical care nurses to experience greater levels of work related stress: nurses feel unsupported, unsafe, insecure and unprotected in the clinical area. The participants indirectly highlighted the importance of leadership skills to enable them to feel supported and protected. The absence of effective, visible and approachable leaders could negatively affect the nurses' morale and levels of work related stress which could, in turn, impact negatively on the quality of patient care.

6.3.2.2.2 Lack of Professional Recognition

Another common experience amongst participants, and a principle cause of work related stress and job dissatisfaction was a feeling of being under appreciated and under-valued. Many participants used the term 'unfair treatment' and others used the word 'discrimination' to describe the treatment of nurses by senior management. The quote below is illustrative of this:

"I don't feel valued as I am not appreciated like other and if my demanding work has not been valued, it makes me feel down and this is accumulated as extra stress because lack of fairness. I know I am doing my job and I don't need to be appreciated for that, but I feel down because other people get appreciated and valued even though they do same work and performance and that's why I am looking to move to another country where I feel treated fairly and equally with others. I have already started the process of immigrating to Canada." (Male 1 from Jordan, Hospital A)

Many participants also felt that they were not sufficiently appreciated by patients or their families, and raised the issue of fairness for the profession, as medical staff are often appreciated by the family, whilst nurses are not:

“Well I never received an appreciation letter, nor have I ever been appreciated: sometimes they send general letters to the unit as a team. However, other people do get appreciated specially doctors who always been recognised by the management. For example, if we have a case we are involved in, the doctors get appreciated even though the nurse plays a key role and that is unfair; because we have a large role, but we don’t get appreciated and that really upsets me and makes me depressed and think about leaving this hospital. I am fully aware that it’s not a requirement for my job to be appreciated but it’s all about fairness and being valued” (Female 6 from Philippines, Hospital B)

“I have been working 2 years here and still never been recognized or valued by receiving any thank you letter where other nurses from different nationalities receive appreciation letter for same level of performance and that really make me think to leave here seriously.” (Female 3, Hospital B).

“I feel bad because I think I’m working hard and I feel stressed because I’m not been recommended by my hard work. And I think it will work by recommending by the manager. And most been recognized is other nationality like Western.” (Male 2, Hospital B).

“Due to discrimination some receive letter and some not. And because of that, I felt that I’m not recognize, not fair and make you not satisfied and that one of the reasons why I am thinking to leave this country.” (Male3, Hospital A)

“I never received any thank you letter or been recognised even I am a hard worker Due to discrimination some receive letter and some not. I felt that I’m not recognized, not fair and make you not satisfied. And when I talk about discrimination I am talking about the unfairness relationship between some nationalities and between the senior and junior nurses as managers always get the huge credit from the management.” (Female 2, Hospital A)

The above quote clearly demonstrates an elevated level of dissatisfaction and work-related stress as a result of not having been treated equally and fairly. It illustrates that participants’ work-related stress could be the result of not feeling valued and of being treated unfairly. Fair and equal treatment for everybody, with the appreciation of senior managers, can create a healthy working environment which can motivate and encourage

nurses to perform well. This attitude seemingly correlates with levels of work-related stress and job dissatisfaction and affects staff turnover.

It is evident that nurses who received feedback and were made to feel valued by their colleagues and senior nurses faced less occupational stress and enjoyed their working environment, thus improving the quality of care that they provided to their patients (AbuAlRub, 2004).

A number of participants felt that they experienced work related stress because they had been discriminated against (in terms of unequal treatment). They clearly highlighted the impact that being treated unequally and not feeling valued had on their levels of work related stress. Being valued and appreciated by managers and senior managers was considered by participants to be helpful and motivational and, where such a network of appreciation existed, nurses seemed to experience lower levels of work related stress and higher levels of job satisfaction. Participants highlighted the need for a supportive leader who is fair and treats nursing staff equally by demonstrating good relationships with all nurses, regardless of their position or nationality.

In the same way that work-related stress might result from junior nurses not being adequately appreciated or valued by senior managers, nurses also felt that they were not adequately valued and appreciated in comparison to physicians. Physicians always appear to be appreciated and valued by the top management of any hospital and by patients, whereas nurses felt that they were not involved in decision making regarding the care of their patients, and not valued.

There were a small number of participants who reported that they had been recognised for their work and they explored the effect of that recognition and appreciation on their levels of work-related stress and in creating a healthy working environment:

“I have been recognised for my outstanding performance before and I strongly believe that appreciation and recognition play a vital role in motivation and competition. It always encourages, you to show your outstanding performance and that definitely improves the quality of care provided.” (Female 1 from, Hospital A)

The above participant believes that positive treatment from managers in motivating nurses, through appreciation and recognition, can impact positively on the quality and standards of care provided for patients. The participants highlighted the importance of appreciation and recognition in improving nursing practices. The nurse in the example above mentioned that she has been recognised for her work and that this recognition

motivated her to improve her practice further. This quotation highlighted the important role of effective leadership in the clinical area; it showed how participants can be inspired by role models and leaders to improve their nursing practice. There is little doubt that creating a healthy working environment, through motivation and implementing the concept of 'equal opportunity,' could reduce the levels of work-related stress and improve the job satisfaction of nurses which, in turn, could improve the outcomes and quality of care for patients.

As demonstrated above, most of the nurses felt that they were not recognised and appreciated for their demanding work and that this negatively impacted on their levels of work-related stress and even on levels of staff turnover. They highlight an important phenomenon which is discrimination in respect of recognition and appreciation based on their nationality, where some (e.g. category A or B nurses) are recognised and appreciated or promoted whilst others (e.g. category C nurses) are ignored and never appreciated.

6.3.2.3 Cultural Issues

Cultural competency is a vital factor in ensuring proper readiness when workers begin new jobs in a culturally diverse environment. All the participants declared that the reason for travelling to and working in the KSA was to maintain adequate salaries to maintain a realistic quality of life. Immigrant nurses may lack the skills for and familiarity with the new job setting and may have limited experience in dealing with the new complex job environment, culture, health system, country's rules and issues for coping linked to job performance and work effort (Moreno, 2015). Socio-cultural coping is linked to the ability to "fit in" or successfully interact with members of the host culture (Bozionelos, 2009). It is related to variables that stimulate and facilitate culture learning and acquisition of social skills in the host culture (Yu, 2014). Differences in culture, especially for those working in the KSA, also constitutes a source of stress for immigrant nurses. This constitutes a stressor that has not been previously described in any other studies before and is a direct consequence of the unique culture and healthcare system found in the KSA. Participants in this research found some aspects of the healthcare culture stressful when compared to their own criteria of what is acceptable and familiar according to their own cultural background.

Most of the participants in this study felt that they experienced work related stress due to stressors related to cultural habits (shock) in the KSA. Analysis identified three sub-themes related to cultural issues. These were: 'relationship with physician', 'discrepancy in salary, work package and fairness', and 'discrimination according to gender and

nationality'. In every instance, this result was significant because it identified new stressors.

6.3.3.31 Relationship with Physicians

A factor identified by the participants that can lead to the development of stress, is the relationship and conflict that happens between nurses and physicians. Cooperation and collaboration between healthcare professionals is important to make sure that they are working as a team to provide high standards of care to patients; however, cooperation is not always achieved, which can cause conflict between them.

Because the study settings are such complex organizations, they are required to recruit many expatriate employees in several roles. Among these staff, physicians and nurses are necessary for the effective operation and organization of a hospital. The relationship between physicians and nurses, therefore constitutes an extremely important function in the provision of service, equal in importance to the soundness of the hospital's infrastructure. Some of the interviewees in the research noted that some physicians underestimated them and looked upon them as though they were inferior. Such relationships are obviously a source of extreme humiliation, stressful and demoralizing. They were also of the opinion that some of the physicians treated them like machines who only receive orders from physicians. Working with the medical team caused stress to the immigrant intensive care nurses:

"I don't feel that I'm working within a team. The physician underestimated us and look at us as followers not colleagues, we are not able to participate in the care plan of the patient because they don't listen, and they are always giving us just orders. And in Philippines it's totally different; they respect your opinion and you feel you are part of the team." (Female 1, Hospital A)

"Another weak point here in this country, is that the doctors just give us orders and instruction and never look at us as colleagues, and they look at us as lower than them and assume they are the superior and the leader. That's the worst thing and makes you stressful because such a relationship can affect the care provided to patients. And this stress is added to your job and your day." (Male 3, Hospital B).

Herr (2015) highlighted that one of the main stressors in the clinical area for nurses is the type of relationship they have with other healthcare members.

Aside from the stress arising from patient care, the expatriate nurses also avoided some doctors who got angry easily. Some participants made the following comments:

"In this hospital, the doctors in charge they don't respect you as a nurse, they always think that they are superior and always right. They see us as followers. They don't listen to us even when you provide evidence-based information and that makes me feel horrible and very frustrated because I have knowledge and something to give, but they don't give us an opportunity and that definitely affect the patient care so sometimes I avoid talking to doctor or suggest any things in patient's care." (Female 6, Hospital B).

"Some consultants are not good because they feel that they are superior. They think that they are superior, and they are not listening to our opinion. Sometimes however, the house physicians are listening." (Male 2, Hospital A)

"I don't feel a part of the team because I felt that I have been underestimated and I can't do independent practice because they want to do what they want. And regarding this, I feel sad and stressed. I did not receive any support from nursing management to be more independent." (Female 3, Hospital B)

These quotations clearly demonstrate the most complex factors that affect the levels of work related stress and job satisfaction for nurses in the KSA: poor communication and unhealthy relationships between physicians and nurses. The relationships tend to be unhealthy because they lack the necessary team-work ethic and there are often instances of conflict. It is clearly documented in this study that there is a lack of professional communication between nurses and doctors. Participants described the relationship between them as stressful because they do not feel that they are part of the team.

It was noted above that the participants highlighted how poor communication can lead to unhealthy relationships and poor working environments that can result in feelings of stress and dissatisfaction. This type of relationship is widespread in clinical areas and has also been reported in other research: Munthali, Bowa, and Odime (2008) reported that 29% of nursing participants in Zambia admitted that conflict with doctors is the main stressor for them, and in a study conducted by Rosenstein (2002), who surveyed nurses, physicians, and healthcare executives in several hospitals, the respondents highlighted some degree of disruptive/abusive physician behaviour in their institutions. It concluded that both the physicians and the nurses in the study agreed that such relationships knock the confidence and morale of nurses.

In this study, the participants expressed their feelings of stress and dissatisfaction in relation to their inability to participate in decision making about general treatment plans in hospitals which are dominated by powerful professions such as physicians. The participants reported that they were considered professionally inferior to physicians in hospitals in the KSA, whereas they were considered colleagues and part of the team in their own countries. In this research, finding suggests that nurses lack the power to reinforce their actions; the participants illustrated how their opinions were not sought and, if they were expressed, they were not listened to.

The participants also agreed that such relationships negatively affected the attitudes of all members of staff to patient care and outcomes; by inhibiting the effectiveness and viability of teamwork exerting negative outcomes on patient care. These results are further supported by Demir and Kasapoğlu (2008), who conducted a qualitative study among Turkish nurses with the aim of gaining more data about the effect of nurse-physician relationships on the therapeutic effectiveness of hospitals. These researchers stated that the conditions that made nurses most unhappy in their work arose out of the relationship they had with the physicians with whom they had to work. They reported that the physicians did not respect them, that they (the physicians) had poor and ineffective communication skills, that they acted in a superior manner and interfered with the work of the nurses in a way that made their work even more difficult.

6.3.3.3.2 Discrepancies in Salary and Packages

A further factor in the KSA is the culture that contributes to increased levels of work-related stress and job dissatisfaction related to the discrepancies in salaries and benefit packages amongst nurses. This issue has a cluster of interconnected factors linked to the nurses' grade, based on their nationalities:

"I think we're discriminated against, in term of salaries maybe, because of the nationality. Some are Australian, Jordanian, and Filipino with the same Job description, the same degree, but the salary is different. And I feel down and stressed because we are doing the same job and they are getting a higher salary. I don't know if this is because of the currencies of their country." (Male 9 from, Hospital A)

"I have been discriminated because of race, in terms of the salary and some nationalities can bring their family but Filipinos are not. Beside this, we can't go

home every year like them which makes me homesick and upset.” (Male 2 from, Hospital B)

“They pay our salary depending on the nationalities, no matter that we have the same degree, experience, are working in the same place and even that I’m working better than they are. We are all here for the money and a better life but unfortunately, because of where I came from, they pay me less. I feel stress because I feel that I’m not appreciated by the management, especially in relation to the salary; that makes you angry and that’s not fair. Why work there?” (Male 4 Hospital B)

The above quotations demonstrate an absolute, new stressor which is the discrepancies evident in nurses’ salaries and benefit packages. More equal salaries would be likely to result in decreased stress levels and promote feelings of job satisfaction amongst nursing staff. Discrepancies in salaries and unfair treatment could result in feelings of frustration and stress that could cause nurses to leave the KSA. As illustrated in discussions of the previous stressor, the participants reported a need to feel equally and fairly treated in terms of salaries and other benefits such as accommodation, or visas which would allow them to bring their families to the KSA.

One of the participants argued that there was no stress related to discrepancies in salaries. However, this participant was hired as a category B nurse and had a higher salary than most of the other participants, who did report feelings of stress:

“No. I didn’t feel being discriminated against, maybe because we are contracted as B category and I am very happy with my salary.” (Male 4, Hospital A)

It is obvious from the above participant’s view that a higher salary can increase the feelings of job satisfaction and decrease the feelings of work-related stress; the nurse felt happier and more satisfied with the salary that he received, regardless of what the other nursing staff received and said.

Another participant reported an additional cause of stress which related to being judged based on salary, rather than on performance:

“I don’t feel comfortable and I feel stressed because I feel I am always observed by other colleagues who get lower salary and benefits. They keep mentioning to me that I shouldn’t take more salary”. (Female 10, Hospital A).

It is clear, therefore, that having a high salary may potentially increase the feelings of stress when colleagues blame you for having a high salary, regardless of the level of

your performance. Some participants with a high salary did not seem to be happy, as they felt that they were always being monitored and observed by colleagues who were in receipt of a lower salary and who may criticize their performance and try to find mistakes in their practice, despite having the same job title and job description. Such a relationship between colleagues does not help to create a healthy working environment in clinical areas and can increase the levels of work-related stress, which can then affect patient safety and staff development.

6.3.3.3.3 Discrimination Based on Gender and Nationality

One of the principles causes of stress for many female participants was the cultural restrictions on females and the way in which females are required to live in the KSA. Discrimination was described by most of the interviewees, especially the female participants; feelings of discrimination were an experience felt to be significant by them and were described often. The interviewees experienced discrimination in several ways including sex between males and females in terms of freedom, differences in salary and benefit packages compared to nurses from other nationalities, being looked upon as servants and treated as such, and varying levels of respect from patients and their families according to cultural differences. In this study, immigrant participants compared workplace input, job load, remuneration and benefits received to those from different nationalities. Some nurses in this study felt discriminated against because of unequal salaries and the opportunity for professional development and managerial promotion according to their nationality, regardless of their certificates or years of experience. Participants felt that they had been treated unfairly and insufficiently remunerated for doing the same work as other nurses and were likely to develop stress in the long run because of the difficulties in trying to maintain the necessities of life and family on a sufficient and reasonable salary. This was the view of some intensive care nursing participants in this research. Below are examples of statements made by them:

“In the hospital I personally have not been discriminated against and I feel I have been treated like anyone else at work, but I do feel that I have been discriminated against as a female in the country as I can’t go out any time and I can’t drive either, and that is what really stresses me out.” (Female, Hospital A)

This would appear to suggest that there is a difference between the treatment of males and females in the KSA. The female participants experienced stress because they lacked freedom and independence as a result of not being able to drive or travel alone, whereas males can do all of that, without any restrictions. Despite their salary, the female nurses

had to live and cope with a new lifestyle and with all the restrictions in relation to dress and travel. Although not directly a work issue, this could lead to increased levels of stress and cause them to consider leaving the KSA for a more liberal continent or country such as Europe, the USA, or another gulf region such as Qatar or Bahrain:

“We women feel inferior, we cannot drive, and we need to wear an Abaya (covering all the body and hair with a special dress and head cover) and cannot go out alone. We need to be accompanied by our relative and at the same time; we are not allowed to bring our family because of visa restrictions and because of feeling of homesick and missing family members.” (Female 3, Hospital B)

Without a close relative, it was impossible for female participants to travel and undertake daily activities such as shopping or dining out. At the same time, it was impossible for females to bring their family to the KSA as they only had a single visa rather than a married visa. Living in a culture where there are many restrictions in relation to dress, travel and other things, such as driving, could initiate and increase levels of stress. Furthermore, participants could experience other forms of stress due to feelings of homesickness. Some participants reported that they were unable to bring their family members to the KSA and they were also unable to return home for a holiday every year, due to the terms of their contract:

“Initially when you arrived in this country you will feel stress because of culture shock, because you came from a free country. In addition, you will find that you are not allowed to drive and always take limousine (taxi) while feeling terrified because you don’t know the drivers, so it’s like you take a risk with your life and this is very stressful. I find sometimes, when you go to the mall and are standing by the cashier to pay something, the other, local people just cut in front of you and you get a shock because they totally ignore you. And when you are standing at the ATM in the heat, and a local male will cut on you...” (Female 4, Hospital A)

This participant mentioned the term ‘culture shock’ which is the tendency for people to become confused and disoriented when coping with a new culture (Greenberg and Baron, 2003, p188). The first stage of culture shock begins within a few months and includes optimism and excitement about the new culture. After several months, individuals enter the second stage of culture shock where they experience frustration and confusion while trying to learn about and cope with their new cultural surroundings. This is the low point in the process that usually dissipates after 6 months (Xia, 2009). In addition, the female participant quoted above illustrates what can happen when you book a taxi to the mall in order to go shopping; she reported feeling terrified and scared when travelling alone. This might add more stress to that which nurses are already

experiencing, because of cultural factors. The example highlights the potentially devastating consequences of not being able to drive your own car and having to rely on taxis for transportation.

6.3.5 Summary of Qualitative Findings

The previous section has discussed the qualitative aspects of this research in which a sample strategy was applied to recruit ICU nursing participants and a semi-structured interview method was used with 19 ICU nurses who had already participated in stage one and met the inclusion criteria.

The causes of job stress were presented as excessive workload caused by shortages of staff, lack of appreciation and recognition and cultural stressors (such as discrimination and interpersonal issues). Many of the ICU nurses found elements of their workload, such as repetitive documentation for completion within specific timeframes, performing non-nursing tasks and staff shortages which increased the patient-nurse ratio, all contributed towards feelings of stress. The ICU nurses also faced organizational stressors including interpersonal relationships with physicians and feeling unrecognised or under-appreciated due to a lack of support from their managers and supervisors.

Many ICU nurses also felt dissatisfaction with their job because of unfair treatment in respect of wages and promotion opportunities, where the determining structures are dependent on nationality. This meant that nurses from certain nationalities received more appreciation and recognition than nurses from other nationalities, even though their jobs involved the same responsibilities and duties and were executed to the same level of performance. In the next chapter, an in-depth exploration and recommendation for further study will be discussed.

6.4 Chapter Summary

This study outlined the research methodology that was used in this research; namely a mixed-method approach. The philosophical perspective in mixed method research was discussed including the different epistemological concepts that can be used to conduct mixed-method research involving both qualitative and quantitative components. This study is an exploratory study that used the embedded mixed-method approach based on Yin (2009). The only unit of analysis was the critical care nurses. A sampling strategy was applied to recruit ICU nurses, with 421 participants completing the surveys, and a semi-structured interview guide was then applied with 19 ICU nurses who met the inclusion criteria.

The quantitative results provided a context to the study setting. It showed that ICU nurses in the KSA are moderately stressed and moderately satisfied with their jobs, but also identified within the scales that some specific aspects of the work environment were associated with high stress and some also for low satisfaction for the nurses.

The qualitative results indicated that ICU nurses were more severely stressed and dissatisfied than had appeared so be the case from the surveys. I was unable to track down the specific causes of the significant differences between the quantitative and qualitative results for individual nurses because I didn't code the CCNSS/MMNSS questionnaires which would have enabled me to track them back and allow comparison between the two sets of results. A possible reason for the differences could be that during the interview stage, the nurses felt more comfortable and trusting in the researcher in a face-to-face situation, having been granted confidentiality and privacy, and this encouraged them to open up and express their feelings more openly or because of the sample size differences, the survey may have identified moderate stress but clearly (from the standard deviations relative to the means) that numbers of people in the survey also identified high stress. However the identification and recruitment of nurses to attend interview utilised a process that was unlikely to have introduced a selection bias, and recruits were sought across the demographic profile in both hospitals.

The main sources of stress identified by the survey varied slightly between the sub-scales but those perceived as strong sources of job stress were 'Inadequate staffing', 'Apathetic and incompetent medical staff' and 'Responsibility and decision making'. Also featured were as further sources of significant stress were 'Lack of respect from physicians', and 'Unnecessary prolongation of life'. Additionally, 'Level of education' was found to be a factor, with degree-level being associated with higher stress scores. All four stress sub-scales were inter-correlated, and all were negatively correlated with the MMSS score for job satisfaction. Work environment factors identified by the MMSS as being associated with 'low' job satisfaction were 'Salary' and 'Vacation' (located within the Extrinsic rewards' category) and support for 'Maternity leave', within the category 'Balance'. Married nurses were also likely to score lower on satisfaction than would single nurses.

Important stressors identified in the qualitative Stage of the study were 'workload', 'lack of appreciation' and 'cultural' stressors. Most of the participants reported that the main demand stressors are workload due to shortages of staff, excessive and often duplicated

documentation and having to perform non-nursing tasks. Amongst job resources, the ICU nurses felt unappreciated, under-valued and excluded from being a member of the team which further resulted in feelings of stress. Additionally, the participants in this study experienced stress due to lack of fairness, discrimination and lack of respect and trust from the medical team. The impacts of these perceived inadequate job resources on ICU nurses indicated that they would be happy to leave the KSA if the opportunity arose to travel to the USA or Europe where they thought they would have fairer and better working conditions.

The interviews also identified that immigrant nurses' performance was affected by their level of satisfaction and dissatisfaction in their job. In the interviews, they felt satisfaction when they were able to effectively communicate ideas, when they were exposed to educational courses, when they felt that their colleagues and supervisors were supportive of them and when they received recognition and positive feedback for their excellent performance. Conversely, they felt dissatisfaction with their job because of extrinsic rewards, primarily unequal 'salary' structures, 'promotion schemes' and 'maternity leave' and 'vacation' time that they felt were based on nationality, and when they felt a 'lack of recognition' from their supervisors.

Some overlaps between the quantitative and qualitative outcomes therefore were evident but the qualitative outcomes extended the contributory factors beyond those detected by the surveys. In the next chapter, a discussion of the findings and their integration into a coherent picture of the situation for nurses in these locations in KSA will be presented and related to the wider literature presented earlier in this thesis.

CHAPTER SEVEN

Integration of the Findings and Discussion

7.1 Introduction

In this chapter, I discuss the research findings in relation to the wider literature on work-related stress and job satisfaction. Stress and job satisfaction in the KSA is strongly believed to be best understood when tackled, analysed and discussed in relation to a conceptual framework of influential factors affecting nurses' stress and satisfaction. The Job Demands-Resources (JD-R) model has been used by researchers all over the world since its inception in 2007, and this research's contribution to knowledge also concerns the significance of these findings in the context of nurses' stress and job satisfaction in the unique culture found in the KSA which may be of relevance to similar countries in the gulf region or other parts of the world.

The purpose of this study was to describe the job stress and job satisfaction experienced by expatriate intensive care nurses working in major teaching hospitals in the KSA, seeking answers to the following research questions:

- (1) what is the overall level of intensive care nurses' job stress?
- (2) What is the overall level of intensive care nurses' job satisfaction?
- (3) What are the factors (stressors) that influence intensive care nurses' job stress and satisfaction?

Aim:

- To explore the level of work-related stress and job satisfaction in expatriate ICU nurses in KSA.
- To explore the possible causes of stress (main stressors) in the same population

As a sequential mixed-method approach was employed in this research, information was collected in separate stages starting with a quantitative stage. However, data from mixed-method research must ultimately be combined at some stage in the study (Tashakkori and Teddlie, 2010). Of the mixed-methods approach researchers, it was Tashakkori and Teddlie (1998) and Greene, et al. (1989) who highlighted how vital it was to consider at which stage the of research process to combine the quantitative and qualitative findings. Integration can be defined as the combination of both quantitative and qualitative data within a given stage of inquiry. Combination might happen during

the research question stage (e.g., both quantitative and qualitative questions are presented), within the stage of data collection (transferring quantitative items into qualitative themes), or in the analysis stage (exploring the quantitative and qualitative findings for convergence of results). Consideration of which decision to take depends on a rich understanding of the sequential model of the research stages and designs. This study has adopted the latter approach, seeking to corroborate the findings from the two Stages of data collection and looking to extend understanding through elaboration of the quantitative data by the qualitative data.

This Chapter is structured in three main parts. Firstly, Sections 7.2 and 7.3 present a descriptive account of the congruences between the quantitative and qualitative findings, and where integration could not be applied. Secondly, Section 7.4 revisits the congruent issues to provide an extensive analysis and contextualisation of the main findings, especially in the context of job stress. Thirdly, Section 7.5 similarly contextualises the findings in relation to job satisfaction. Finally, Section 7.6 considers the relationship of stress and satisfaction and analyses the value of the Job Demands-Resources model with respect to present findings and how combination of the two models discussed earlier in Chapter 4 might provide a better theoretical positioning of job stress and satisfaction for ICU nursing in KSA.

7.2 Integration of the findings: Main results

The population in the KSA in 2016 was 30,770,375 with an annual growth rate of 2.3% based on the general authority of statistics in the KSA. This rapid growth has increased the demand for healthcare institutions and has increased the workload for healthcare professionals. The KSA government has faced these demands with development in healthcare by building new hospitals and healthcare services. The rapid growth in healthcare institutions has created more medical job opportunities, especially in nursing and has consequently resulted in staff shortages and increased workloads on employees (Al Mutairi, 2016). High rates of nursing turnover have been reported globally as well as in the KSA due to stress and dissatisfaction.

Job stress and dissatisfaction in nursing is influenced by many stressors which include workload due to staff shortages, extra duties and paper-work and stress arising from a lack of support and recognition (i.e. not being valued). In the KSA, cultural factors related to relationships with physicians, discrimination and discrepancies in employment packages and benefits are additional stressors.

Most of the main findings of this research were identified in the first research stage and followed through in the second stage of the research; for example, quantitative findings suggested that most of the intensive care nurses reported moderate stress and moderate satisfaction. These results were followed up and explored more deeply in the second (qualitative) stage.

Results in the quantitative stage also suggested a statistically significant association between education level and the level of stress experienced. It would appear that nurses with a higher level of education perceived more stress and (borderline significance) greater satisfaction presumably due to their increased ability to cope and deal with stress. Main sources of stress for the nurses in Stage One were related to staff shortages, lack of appreciation and of being valued or respected, and poor relationships with physicians. During the interviews in stage two, participants opened up and explored these stressors to explain why they were so significant (below).

7.2.1 Workload

The findings from the quantitative research suggested that staff shortages were the most significant stressor and biggest cause of stress for ICU nurses in this study. This was explored more deeply during the qualitative stage when they explained how staff shortages lead to increases in their workload. They linked consequent adverse nurse:patient ratios to staff shortages and increased workloads, which were also associated with additional non-nursing tasks and excessive (often duplicated) paper-work and documentation. The participants revealed other causes for increased workloads by having to perform non-nursing tasks such as distributing and collecting food trays due to shortages in catering staff, and cleaning bed spaces and floors or equipment. This increased their feelings of stress because they felt it took them away from delivering care to their patients. Much of the workload arising from extra duplicated paper-work and documentation (and the stress it caused) was in order to meet the accreditation requirements of JCIA, CARF and CBAHI (see Section 6.3.2.3). Staff shortages and increased workload were viewed as the main reason for increased nurse turnover and intention to quit the job.

7.2.2 Lack of Support and Recognition

Another common experience revealed by participants, and a principle cause of work-related stress, and job dissatisfaction, was the feeling of being underappreciated and under-valued. This finding in the quantitative stage was linked to moderate stress in terms of lack of team work and lack of respect. In the qualitative stage, it was further

linked to a perceived lack of fairness in being valued and appreciated as a member of the team.

7.2.3 Cultural

The participants in this research revealed moderate-high stress in the quantitative stage on items such as lack of respect from physicians, disagreement with the medical team, personality conflict and decision making. In the qualitative stage, they expanded on this and suggested that some of these stressors, such as conflict and lack of respect from physicians, arose because of the cultural differences experienced in the KSA. They reported that doctors were the only decisions makers in the KSA and nurses were not appreciated as a part of the team. Moreover, some nurses stated that they were stressed because of discrimination in terms of salary, other benefit packages or the opportunity for professional development based on their nationality regardless of their experience or qualifications. Most of the female nurses reported a high level of stress resulting from the discrimination that exists between males and females in the KSA in terms of restrictions on the way they dress and not being allowing to drive or travel alone.

7.3. Data Not Used in the Integration Process

Coming from two very different research traditions – quantitative and qualitative – it would be surprising to find that all outcomes from mixed methods lend themselves to integration. In this study this was found for the findings that:

- From the quantitative data – The CCNSS survey tool identified incompetent medical staff (Category Patient care) and unnecessary prolongation of patient pain and life (Category Patient care). These appeared as strong factors within the survey analyses but received little mention in the interviews despite the focus on patient care.
- From the qualitative data – some of the participants related causes of discrimination between males and females (and consequent stress) to lack of freedom due to the religion in the KSA and the role of government and decision makers who are all males. Such details referred to indirect aspects of work and the politics of work but were unrelated to any of the questions in the survey tools and are illustrative of the extended detail that may be identified in qualitative methods.

Due to wordage restrictions it has been necessary to exclude these 'peripheral' findings from this mixed methods evaluation as the integration of information most pertinent to that evaluation to answer the research questions took precedence; the focus has been on discussing the most meaningful information that had the main influences on the subject/results being explored. It is proposed that unused information will be published in future.

7.4 Stress and Dissatisfaction: Discussion

To understand the stressors that the ICU nurses recognised as being the root cause of their job stress and its impact, I asked the participants to explain the challenges and main stressors that they faced at work in the KSA. I also encouraged and advised the participants to deeply explore their personal experience and vision. The next section will discuss the main issues that were independently raised by the ICU nurses in this study. The findings presented in this chapter have showed that ICU nurses in the KSA are moderately stressed and moderately satisfied. To measure total stress, scores for all 40 items from the CCNSS were added together for each component from the four subscales (stress frequency, intensity, challenge and threat). In order to compute for a particular subscale, the appropriate items for that category were added together. The CCNSS comprises a list of circumstances regularly encountered by nurses in clinical areas, and the participants were asked to indicate for every item how stressful it would be for them. In each circumstance, the level "never" was scored as 0 for 'Stress Frequency', "not at all stressful" for 'Stress Intensity', "not at all threatening" for 'Stress Threats' and "not at all challenging" for 'Stress Challenges'. Similarly, the level "very often" was scored as 4 for 'Stress Frequency', "very stressful" for 'Stress Intensity', "very threatening" for 'Stress Threats' and very challenging for 'Stress Challenges'.

The reported mean of the overall job stress was 'moderate' (mean score = 2.1), according to published criteria (Albers, 2017; AlZyoud, 2019), but the range of scores indicated frequent occurrences of highly stressful situations. The highest reported mean category score was for 'Patient care' with a mean score of 2.29 and the lowest score was for 'Knowledge and skills' with a mean of 1.89. However, the highest reported means were within specific items, in particular for 'Inadequate staffing' and 'Apathetic, incompetent medical staff', respectively, within the Management category, 'Unnecessary Prolongation of Life' and 'Responsibility and Decision Making' in the Patient care category, and 'Lack of Respect from Physicians' in the Interpersonal Relationship category. All of those scores exceeded the published threshold for excessive stress. The

following locate these items and categories within integrated themes after merging them with the emergent qualitative outcomes.

7.4.1 Integrated theme: Workload

The CCNSS scores stress according to four features: stress frequency, intensity, threat and challenge. Based on this study, the most significant source of stress for critical care nurses in the research sites in the KSA is their workload and, as indicated both in the CCNSS questionnaire and interviews, nurses in this study identified shortages of staffing as the most 'frequent' stressor they faced while in the KSA. The CCNSS findings indicated that the job stress score related to shortages of staff was 'moderate' but in the interviews participants noted that because of staffing shortages leading to increased workloads, they weren't able to provide high standards of holistic care to their patients. These findings reinforced those by other researchers (Al Nuair 2017; Tyson & Pongruengphant, 2014).

Earlier research found that more nurses on the unit does not always lead to higher quality of care (Adam and Bond, 2003). Adam and Bond (ibid.) suggested that the level of competence and the bridging between skills and knowledge are more powerful in maximizing the quality of care. Other studies reported that effective nursing leadership is the key factor for providing high quality of care to patients (Scott and Moye, 2002). However, the situation for nurses has deteriorated since then and research findings are more consistent with staffing being a significant cause of stress for nurses (Stephenson, 2004; Khorana, et al., 2005; Smeltzer, et al., 2005; Hayes, et al., 2006; AbuAlRub, 2006; Sveinsdóttir, et al., 2006; Lambert, et al., 2008; Emilia and Hassim, 2007; Zaghloul, 2008; Al-Kandari and Thomas, 2008; El-Jardali, et al., 2008; Pal and Saksvik, 2008; Purcell, et al., 2011; Wheeler, 2010; Mauno, et al., 2016). Intensive care nurses in this study also stated that there was insufficient staffing to get the job done, resulting in them not having the time required to provide psychological and emotional care to patients and to respond to patients' needs.

Nurses mentioned in the interviews that staff shortages, combined with extra tasks and extra paper-work and documentation, resulted in increased workloads for existing nurses, which caused feelings of exhaustion and increased stress and consequently the number of nurses leaving the profession. Some nurses felt particularly unhappy about the amount of paperwork they were given because they feared that their supervisors would reprimand them if documentation was not completed – regardless of the number of patients that they were having to look after. During the interviews, some participants

made it clear that it was a widespread practice among nurses to falsely document things they had not done in order to avoid the repercussions of not having completed the documentation. Such comments are of course of serious concern for patient well-being.

Evidence supports low numbers of nurses and high numbers of patients, adversely affects the quality and standards of care given to patients (Al Nusair, 2017; Bailit and Blanchard, 2004; Sochalski, 2004; Lang, et al., 2004). Previous, recent research into the main causes of job stress in the KSA, has indicated that staff shortages and increased workload are the main reasons for stress and high turnover among nurses in the KSA (Kamal, et al., 2012). Furthermore, when nurses migrate from the KSA to other countries, it is likely to not only increase the workload that presents difficulties but also the affect it has on the morale of the remaining staff. It is commonplace to see nursing staff leaving for Europe, Canada and the USA because of the stress related to workload and low satisfaction (Kamal, et al., 2012). Migration of nurses from the KSA leaves behind an already disadvantaged system and that leads to worsening work situations for nurses who remain (Kingman, 2000, Chianda 2005, Dovlo 2005, Ross, et al., 2005). In addition, migration of nurses affects the skills mix and subsequently the quality of care.

With low numbers of nurses, there is an increased risk for reduced quality of care which will reflect negatively on patient safety (Bailit and Blanchard 2004; Sochalski, 2004; Lang, et al., 2004). Hospital understaffing and growing hospital nurse shortages (Parker-Pope, 2001; Stolberg, 2002; Trafford, 2002) constitute a key inhibitor of safe and effective care provision (Aiken, et al., 2001) and a shortage of nurses contributes to nurses' stress caused by work overload (Joint Commission on Accreditation of Healthcare Organization (JCIA), 2002). Conversely, a favourable patient-to-nurse workload has been linked to lower rates of adverse patient outcomes and fewer medication errors. However, while the JCIA standards highlight and list the importance of patient safety and enhance the concept of 'patient-centred care', nurses in this study were sceptical of JCIA as they thought that the accreditation process was unnecessary and resulted in unnecessary extra paperwork which actually took them away from spending time with patients.

Within their workload, intensive care nurses in the KSA are also frequently required to perform non-nursing tasks, such as cleaning rooms and distributing food trays, housekeeping duties and moving patients by pushing beds. This can affect the quality of care provided to patients as some vital tasks for critical care nurses, such as oral hygiene, patient comfort and skin care, health education and proper documentation, were frequently and consistently reported in the present study as not having been done; unlike in the US and Europe where nurses focus primarily on nursing tasks although paperwork is an increasing distraction in those countries (Zuraikat and Alamri, 2011).

This initiates feelings of stress for nurses because, on the one hand, they feel guilty for not providing a high quality of care and, on the other, because they get blamed by the manager for not doing so (Adam and Bond, 2003).

The results of this research revealed that staff shortages and a heavy workload also decrease job satisfaction in addition to causing stress, and these findings are consistent with other research studies (Chikanda, 2005, AbuAlRub, 2007). It is clearly documented by other scholars that nurses' job dissatisfaction was the main cause of turnover and staff shortage (Ingersoll, et al., 2002; Larrabee, et al., 2003). In contrast, other scholars have suggested that providing high-quality care to patients was the key factor in generating job satisfaction (Newman and Maylor, 2002; Be'gat, et al., 2005; Perry, 2005).

Job satisfaction is inversely related to job stress (e.g. McVicar, 2016; also present study), and sources of work stress therefore might be anticipated to have a negative impact on satisfaction. This study has found that there is a meaningful relationship between the number of nurses and the numbers of patients cared for; the higher the number of patients per nurse, the higher the level of nurses' stress. A study by Maben, et al. (2007) to investigate newly qualified nurses in the UK showed that nurses often started their job with strong ideals, but after just two years many were disappointed and the ideals they initially held felt increasingly compromised and difficult to uphold. Nurse burnout was prevalent, and many nurses changed jobs or felt forced to leave the profession altogether. They argued that if good staffing levels could reduce stress and allow nurses to sustain their ideals about standards of patient care, burnout and dissatisfaction could be reduced.

A further influence on job satisfaction, and staff well-being, is that, globally, lengthy work shifts and overtime are also increasing in nursing as a result of staff shortages (Rogers, et al., 2004), which can also cause increased job stress among nurses (Park, et al., 2010). However, replacing shortages or those who have migrated can be problematic in the KSA. Most of the managers highlighted, clearly, that training and developing senior staff is difficult because when new staff are employed they must complete a supernumerary period of three months and achieve all the competencies and mandatory training; any immediate impact from recruitment is therefore delayed.

Cost containment strategies and reduced hospital budgets have become problems across the globe (Su, et al., 2009) and are not unique to hospitals in the KSA. Increased workload and job stress is prevalent worldwide and reflects negatively on nurses' satisfaction and morale (Sellgren, et al., 2009) and that meaningfully increases staff turnover and burnout which, as a result, leads to more nursing shortages (Duffield and O'Brien-Pallas, 2003, al Nusair, 2017).

7.4.2 Integrated theme: Lack of Support and Recognition

The quantitative findings of this research reveal that nurses also developed stress related to work especially with reference to 'Responsibility and decision making' (Patient care category) and 'Lack of respect from physicians' (Inter-personal relations category). Interview participants also reported in this research that the support and recognition they received from their supervisors and work colleagues was inadequate, leaving them feeling unsupported and undervalued. Support from supervisors or managers was perceived as a very important factor based on the results of this study because it provided an opportunity to reduce levels of job stress and had the potential to avoid conflict (Allen, et al., 2000; Goldsen and Scharlach, 2001; Yu-Fei, et al., 2012). These results are consistent and congruent with previous research (AbuAlRub and Al-Zaru, 2008; Magnusdottir 2005).

Lack of positive support and constructive feedback from managers or senior nurses in the nursing profession creates an unhealthy work environment and destroys the trust between senior and junior nurses which leads to stress for staff in the workplace (National Patient Safety Agency, 2004a). It is reported that nurses who received support from colleagues and senior nurses faced less job stress (AbuAlRub, 2004), whilst providing support and recognition to nurses in clinical areas creates a healthy work environment that is reflected in improved quality of care delivered to patients. This serves to support and justify the decision to choose the Job Demands-Resource model as the theoretical framework of this study; good resources (i.e. reward and recognition, or management support and effective leadership style) can help to buffer stress levels (see later).

Research shows that providing support and recognition from managers improves the intention to stay in a job (Connelly, 1997; Wilson, 2006; AbuAlRub and Al-Zaru, 2008). This is mirrored in the current research in KSA, as many of the nurses in the study reported that they were contemplating leaving their job, because they felt they were not supported or recognized for their contribution and demanding work. The nature of the relationship between employees and managers is interesting, given that the role of managerial recognition is afforded slight importance in its relationship to work related stress (Galinsky, et al., 1993; Fu & Shaffer, 2001; Yu-Fei, et al., 2012). Many managers argue that the role of managerial appreciation and recognition as a moderating factor is given less importance because a segmented method has been used to separately describe the role of work stress, managerial appreciation and support and work disturbance on conflict at work (AlNusair, 2017). Other have used a simple correlation

approach to assess the relationship between job stress and conflict at work and neglected to rationalise the effect of appreciation and recognition in maximising or minimizing the effect of stress on employees' conflicts.

The findings of this study showed that nurses feel ignored and isolated in KSA because of the lack of support from the senior members of staff in situations such as conflict with physicians, or when patients or patient's families abuse them. At the same time, they worry that they will be subject to investigation if a patient lodges a complaint against them (Riahi, 2011). In the interviews, nurses expressed dissatisfaction with their nursing leadership and reported that most of the unit managers are there just to "search for our mistakes" and thus to blame them. Present evidence further suggests that when any problem occurs on the unit, such as verbal or physical abuse of a nurse from patients or a relative, including conflict with physicians, no action will be taken to support or protect the nurses. This will affect the quality of care and patient safety because strong and supportive leadership at the unit level is always associated with an increase in learning motivation and high-quality performance (Scott and Moye 2002, Mula, 2003), with the result that the nurses' role in patient care will be maximized.

In addition to the lack of support from the managers and seniors, findings from this research reveal that nurses in KSA reported a lack of recognition through various aspects of their work such as promotion, rewards or even simple words like "thank you". Some reported that they are not treated the same as others who are appreciated and recognized because of their nationalities; nurses from certain nationalities (Western) and will receive 'thank you' letters and may be assigned as employee of the month, whereas other nationalities such as Pilipino, Jordanian and Egyptian are never recognized or complimented. Some nurses think they are not regarded as highly as others because of the discrepancy that exists in salaries for the same position and doing the same work (discussed below in Section 7.4.4). These findings are consistent with previous research, pointing to the unequal treatment of nurses from a salary and benefits point of view (AbuAlRub and Al-Zaru, 2008).

Lack of recognition and reward can also initiate conflict between nurses themselves as they start to look at each other and compare salaries; it was reported by some nurses that they felt stressed because they thought they were always being observed and monitored by other nurses who received lower salaries, or if they had been rewarded as 'employee of the month'. Recognition and positive regard is considered to be a motivator for staff (Dielman, et al., 2003) and, taking the evidence from this and previous studies, above, it is not surprising that a lack of organizational support and divisive and unfair

rewards and treatment for different employees might play a vital role in nurses' work-related stress in the hospitals within the KSA.

There is therefore a need for managers and decision-makers in the hospitals to provide support and motivation for nurses, not only in relation to salary and remuneration issues but also in providing support to nurses in clinical areas, especially in the face of their disempowering working situations.

7.4.3 Integrated theme: Relationships and Conflict with Physicians

Another key stressor identified in this study related to the nurses' relationship and conflict with physicians. Whilst intergroup conflict was the most common type of conflict experienced by the nurses in this study in KSA, studies in other nations have identified this type of conflict as being less common (Ahmed, 2008). This finding is also at odds with a study conducted in Saudi Arabia by Zakari, et al. (2010) who found that the most common kind of conflict was interpersonal and the least common conflicts were intergroup. Most of the intensive care nurses in this study described their relationship with medical staff in the clinical areas as being considered professionally inferior to doctors. This issue however is not as simple as it may seem due to certain precipitating factors: results from this research also suggest that nurses do not feel that they are part of the team as exemplified by their exclusion from decision-making processes and participation in the general treatment plans for their patients.

These results are consistent with previous studies pointing out that the nature of the relationship between nurses and other healthcare personnel can lead to stress (Wheeler, 2010). Hospital environments, and particularly intensive care units, are exposed to many kinds of conflict (Kelly, 2006). Historically, the nurse-doctor relationship is unequal and characterised by the dominance of the doctor, with the nurses assuming the lower status (Qolohle, et al., 2006). This situation is mirrored in this study as nurses felt doctors undervalued them and felt that not following the doctor's orders, even if they were not considered by the nurse as neither right nor safe, would create a problem for them, especially given the lack of support from management. Doctors' income, social and professional prestige and power, means that physicians are often able to reinforce their own dominance in health institutions. This imbalance can lead to higher levels of work-related stress and job dissatisfaction.

In the KSA, doctors' orders are highly respected and most nurses find it difficult to challenge them in the hospital setting; a finding consistent with a previous study carried out in same region (Mrayyan, et al., 2005). The findings from this study reveal that some nurses give more priority to getting the nursing work done, which revolves around task-

oriented actions, as opposed to promotion of the positive health of the patients. As a result, some nurses sometimes felt no motivation to participate in decision-making about their patients, which in turn can cause stress, as they feel they are not part of the team. Concerns were clearly expressed by the critical care nurses regarding their inability to initiate a discussion with a doctor about a practice they felt might be ineffective or unsafe. In addition, they felt unable to participate in making decisions about their patients. In other words, nurses expressed the view that patients might be victims because of the lack of teamwork and poor communication between doctors and nurses. Such poor communication has, perhaps, been influenced by the nature of the relationship and the power of professionalism in a culture such as KSA where the power differentials create a gap between the two professions (nursing and physicians). These behavioural manifestations confirmed the view that a major power imbalance exists between physicians and nursing within the institutions, and is likely to lead stress amongst those least empowered.

Conflicts with doctors are not the only source of stress for critical care nurses, but it was viewed as the most difficult issue for them to manage. Research has shown that conflict with doctors can lead to psychological ill-health among the nurses (Ahmed and Schaufelgr, 2003) and is associated with job dissatisfaction (Stordeur and Dhoore, 2006) a finding that was mirrored in this research, which revealed a combination of both stress and dissatisfaction with the job. The study revealed that some nurses thought that even though doctors failed to communicate adequately with either patients or nurses, it would eventually be the nurses who were blamed by the doctors if things went wrong. Although such findings may not be generalizable, they spotlight the fact that the poor relationship between doctors and nurses is likely to threaten patients' safety.

Looking at evidence from the literature (Ahmed, 2008; Zakari, et al. 2010; Al Nusair, 2017) it might not be surprising that the lack of professional communication and the unprofessional relationships between doctors and nurses arises because of gender. Most doctors in the Middle East and particularly in the KSA are male, and it has been reported that female doctors are much more co-operative with nurses (of both genders) than are doctors who are male (Shoiqrat, 2009). In addition, the results of this research reveal that nurses were only 'moderately satisfied' with the relationship with physicians and this was consistent with previous studies (Wilkinson and Hite, 2001; McGillis and Irvine, 2001). Communication skills of nurses (and other disciplines) is a vital factor in job satisfaction and is reflected in sources of stress and turnover (McGillis and Irvine, 2001). Nurses' satisfaction can be easily increased and maximized by implementing effective and professional communication skills with other disciplinary teams (Adams and Bond, 2000; Kovner, et al., 2006).

Relatedly, respondents described discrimination as favouritism to a specific group or nationality, thinking of nurses from the cultural A, B, M and D categories in terms of negative stereotypes, or unequal salaries. The content of the nurses' answers showed evidence of discriminatory and racist bullying. The majority of the nurses (58%) reported discrimination and bullying due to gender: female participants in this study believed one of the main stressors for them was the discrimination against them in regard to the restrictions and rules imposed on females due to the conservative culture in the KSA (e.g. women must wear full dress covering their body from head to toe, women are not allowed to drive and women are not allowed to travel alone without a male relative from her family). This kind of bullying should be principally considered as a type of discrimination or racism (Allan, et al., 2009). In the KSA, there is a lack of legal measures and rules against discrimination and there are no authorised regulations that stop such acts (Al Nusair, 2017). However, it is outside the remit of the present study to investigate in depth the effects of cultural diversity or explore of the impact of work relations involving race, gender, religion and ethnicity.

In summary, nurse's voices and opinions were not sought by doctors and even if they were offered, they were ignored. Nurses felt undervalued by doctors because of the lack of two-way communication and multi-disciplinary team work between doctors and nurses, and that consequently reflected negatively on the principle and concept of patient care, likely compromising the quality of care provided to patients. It has been recognized and reported that healthcare systems in many countries (Philips and Zelek, 2003, Davis, 2004), as in the KSA (Zakari, et al., 2010), are dominated by doctors and, as a result, nurses in the KSA, and in the Middle East in general, struggle to gain professional power and recognition.

7.4.4 Integrated theme: Discrepancies in Salary and Benefit Packages (Lack of Fairness)

The results of this research indicate that discrepancies between the salaries of different nationalities contributed to nurses' stress. The majority of nurses, who participated in this study (68%), mainly from D and M categories (Middle East and Philippines), felt that stress arising from discrimination was caused by a struggle for authority, promotion, or to maintain one's place in the hierarchy. Other reported triggers involved work situations and the discrepancy in benefits based on nurses' nationalities and backgrounds, regardless of academic qualifications or clinical experience.

According to the literature, for years, the salaries and benefits of immigrant nurses contracted for employment in the Middle East have depended on what part of the world

they came from or received their education in (Alkorashy and Al Moalad, 2016). This has led to nurses receiving variable rates of pay.

In this study, nurses in KSA from A and B categories (North America, the West and South Africa) benefit significantly in comparison with nurses from D and M categories (Middle East or Philippines), and this initiates and propagates stress amongst nurses from the latter group of nations. Those from the M and D categories reported that they felt stressed and were dissatisfied with their jobs because of the lack of fairness. Several participants mentioned in their interviews how unfair this was, and this situation is also confirmed by Alswaid (2014), who found that employees from Asia working in the Gulf Region were discriminated against in terms of salary and other benefits compared to employees who came from Western countries, even when they were performing the same work and tasks. Nurses who received more favourable salaries and benefits were less likely to be stressed and numerous respondents reported that the discrepancy in wages has created a hotbed for argument and conflict between nurse colleagues from different backgrounds. Specifically, those who came from developed countries such as in the A and B categories are paid higher wages compared to those who came from D and M category, even though all were recruited as staff nurses with the same duties and responsibilities. The lack of fairness in salaries and other benefits has been reported by nurses from various nationalities and is recognized by managers and head nurses as a cause of stress and dissatisfaction which leads to conflict between nurses. In particular, nurses from Western countries, who were paid more than other nationalities, stated that such discrepancies meant they were constantly watched and criticised because of their higher pay and preferable overall package of benefits.

Some nurses also revealed that they experienced stress from not being able to bring their loved ones and family members to the KSA as they had a single visa, valid only for themselves and not the rest of their family. In contrast, some other nationalities were able to bring family members such their spouse and children. This runs counter to the direction of findings from other studies that family/work balance, for example, by introducing practices such as flexibility in part-time work or shift swapping, increased maternity leave and childcare facilities (Abu Salem, 2000; Thompson and Brown, 2002; Yaktin, et al., 2003) helped to increase job satisfaction and decrease stress.

The research clearly highlights that the discrepancy in salaries between different nationalities is a source of stress for critical care nurses who work in the KSA. This affects both those who receive high and low salaries; variations in the benefits package (such as differences in accommodation, education fees and ticketing) exacerbate this. Some nurses, who received lower salaries, felt stressed because of the unfair treatment for all

employees while others found it stressful to be paid more than their colleagues because of the scrutiny they received from them. Even though this is an issue which undoubtedly results in stress and ill-feeling between nurses, it is often difficult to evaluate the significance of differences in salaries when currency exchange rates and the cost of living between different countries is taken into consideration: for example, the salary a Filipino nurse in the KSA may be more valued in their country compared to that of a British nurse working in the KSA with a higher salary once the Saudi currency has been converted to their own country's currency.

The data suggests it is likely that hospitals in the KSA use a special strategy to attract certain nationalities to work there by offering them higher salaries, whereas other nurses with the same qualifications and responsibilities receive lower salaries and fewer benefits. This can be considered an unsupportive strategy for the retention of staff, as nurses can experience feelings of frustration and stress due to being treated unfairly. This could also generate conflict between them. It is clear that this study is a baseline for further research that could explore, in depth, the issues of job stress and satisfaction with a larger sample of nurses in the KSA to better understand this phenomenon. To date, no other research appears to have been conducted which highlights or explores the issue of discrepancies of salary and other benefit packages offered to nurses in the KSA.

According to Kingma (2006) and Alswaidi (2014), most of the nursing employees who come from developing countries accept the lower salaries offered by their employer and hence the practice has not been challenged or changed. Part of the reason for deciding to work in the KSA, even though they are awarded lower salaries relative to some of their colleagues, was the reality that they were still receiving a better salary than they could earn back in their home country. Nevertheless, this is still a violation of the value of 'equal opportunity and pay' and predictably the perceived unfairness in the clinical area might penetrate deeper to increase nurses' work-stress and dissatisfaction (Atiyyah, 1996).

7.4.5 Integrated theme: Cultural Discrimination

The findings of this research reveal another important issue regarding cultural causes of stress and dissatisfaction for nurses in the KSA that are related to cultural diversity in a multicultural country. Results showed new sources of stress that as far as the writer is aware have not been highlighted or reported by scholars, indicating that some of the country's systems and cultural practices could lead to stress for male and female nurses for a variety of reasons.

This stressor, which was beyond the ICU immigrant nurses' control, was perceptions of culture shock. Many of the participants experienced a dual culture shock due to their

involvement in an unfamiliar culture, compounded by interacting with a large group of cultures that were different from their own. Such involvement led to the development of significant complications, including job stress, burnout symptoms, frustration, insecurity, and the inability to adjust to their new role in new environment. It also extended to uncertainty, particularly during their caring and interaction with their patients because of language barriers and inability to implement the concept of “patient centred care” ; they were not sure what type of nursing practices were needed to be satisfactory within the KSA culture and which might adversely affect their professional performance and the quality and safety of care they could provide. The literature review revealed similar problems from culture shock, but occurring in different contexts (McLeod 2008). Most of the studies that have been conducted so far have investigated the experience of students studying abroad; however, no study so far evident has explored the effect of culture shock on patient safety and quality of care delivered among immigrant nurses in a diverse cultural setting like KSA.

The language barrier is well reported as one of the stressors among ICU nurses in KSA (Al Nusair, 2017). Most of the nurses in this study couldn't speak the Arabic language and nurses from other countries would communicate through their own language, which resulted in a higher level of conflict with colleagues and resulting in frustration and job stress. It is vital for nurses to be able to understand the fears, worries and anxieties of patients during hospitalisation and during the provision of care they need. This type of linking is likely only if patients and nurses are able to communicate well and clearly together, for which language is an important part. It has been identified that language barriers are connected with poor quality of care delivered, lower efficiency for the health organisation and patient, more clinical tests on patients, more patient visits, low patient and staff satisfaction (AlKhathami 2010).

Female nurses reported feeling stressed because of the restrictions imposed on them simply because they are females in KSA, for example, not being permitted to drive cars (at this time of writing) or go out alone without a male who is a close relative such as a husband, father or brother. Some male nurses however, also reported that they experienced stress because poor driving practices in Saudi meant they did not feel safe on the road illustrated by the number of serious accidents that often occur.

As discussed in the local context chapter, women in the KSA in general are treated completely differently to men who have greater freedoms such as driving, travelling alone and even wearing what they like. Restrictions for females restrict what they should wear and how they can travel. Some nurses reported that because they were unable to bring

their families to the KSA due to visa restrictions, they were unable go out shopping easily, since they had no family members to accompany them. They found this very stressful and it led to dissatisfaction because of the conflict between the customs in the KSA and their home country. Other females found it shocking and stressful to live as a woman in the KSA because of the lack of freedom for females compared to those in Western countries where there is no formal discrimination between males or females for dress code, travelling or driving your own car.

Other female nurses found it stressful because they lived away from family members and loved ones such as husbands and children and were unable to bring them to the KSA due to contract and visa restrictions. With the lack of flexibility in work duties when compared with other countries such as the UK, it is necessary to improve aspects of the family/work balance in the KSA, such as flexibility in part-time work or shift swapping, increased maternity leave and childcare facilities in order to improve job satisfaction (Mrayyan, 2007).

Massive changes happened and more fairness has been implemented between different nationalities in KSA recently with the new regime. In addition, women has been giving same rights as men after this study conducted, women now are allowed to drive and are allowed to travel alone without having a male member of her family.

In summary, the participants' views appear to criticize the system in the KSA because it exacerbated their stress levels due to the clash between two cultures and the experience of moving from a relatively free country to one which is very conservative and restricted. There are however some similarities between the Saudi and Western contexts in terms of the age group and, importantly, the similarity between the education systems; the education system in the KSA is similar to that in the USA. The driving system in the KSA is also similar to the driving system in the USA and most countries in Europe in terms of the road system, and the nursing and medical systems are also similar. Unfortunately, there is no evidence from the literature to evaluate the effects of these factors on the culture-shock phenomenon and for that reason more research is required to explore this in the KSA.

7.5 Job Satisfaction

In this study the MMSS was adopted and used as a tool to measure participants' job satisfaction in intensive care units. The overall mean of the MMSS score was 2.94 which is considered 'moderately satisfied' according to published criteria (Damayanthi et al, 2014). Other researchers found similar results (Abu Salem, 2000; Mrayyan, 2005). Extrinsic rewards were scored as 'low' in terms of satisfaction for ICU nurses in the KSA.

As indicated in this study and by several other researchers, limited external rewards such as salary, holiday allowance and other benefits can influence the level of nurses' satisfaction and dissatisfaction (Chung, et al., 2003; Ma, et al., 2003; Mrayyan 2005). El-Jardali et al (2009) stated that nurse's dissatisfaction was mainly influenced by low salaries and inflexible working hours which compromised the family status, rather than by intensive workloads.

Job satisfaction and job stress are inversely correlated (Findings) so previous discussion related to sources of stress and impact has already highlighted how they may also contribute to low job satisfaction. An issue of particular note is that work/family balance was scored by participants as second lowest for satisfaction with a mean of 2.36; while this is classed as 'moderate' according to published thresholds it is firmly at the low end of the 'moderate' range of scores. Shift patterns and family balance play a vital role in nurses' stress and satisfaction: nurses who work longer shifts (day or night) reported lower satisfaction. To increase ICU nurses' satisfaction, there is a need to consider not only increases to salaries (above), but also to make significant improvements to aspects of the family/work balance e.g. holidays, provision of visas for family, improving maternity and parental leave and consideration of part-time duties (Al Nusair, 2017). Regarding the latter, a study by Fukuda, et al., (2008) reported that nurses who worked more than 5 nights per monthly rota reported more stress, low morale, depression and job dissatisfaction when compared to nurses working early shifts. In another study, 142 female ICU nurses reported more depression and dissatisfaction because of compromising their family life due to working night shifts (Muecke 2005); a finding that was supported by a study conducted in Egypt by Mohamed et al., (2011) and another study in the USA by Dall'Ora, et al., (2016).

Low job satisfaction can have a negative impact on performance, quality of care provided and patient outcomes (Al Nusair, 2017). Job stress and dissatisfaction has a negative impact on both nurses and organizations as it affects staff morale, increases anxiety and depression, decreases motivation and feelings of enjoyment at work all of which can negatively affect the quality of care and cause poor patient outcomes, increase hospital stays and increase death rates (Zuraikat 2011, AlMalki, et al., 2012)

7.6 Perceived Job Stress and Satisfaction among Intensive Care Nurses in the Kingdom of Saudi Arabia: A Model Evaluation

Correlation analysis of the CCNSS and MMNSS scales identified that a global MMNSS score for job satisfaction was strongly and significantly related to all four features of

stress that are identified in the construct of the CCNSS (stressor frequency, intensity, threat and challenge) and to a global stress score. The relationship was inverse indicative of low job satisfaction being associated with high stress impact as has been reported in the previous discussion- Mean scores for items and categories within the CCNSS highlighted particular sources of high stress and low satisfaction in the work environment indicating structural elements that are part of the working conditions in the wards and of employees' situations. Those findings are commensurate with the extensive overlap between antecedents that are common to both stress and (dis)satisfaction (McVicar, 2016). In that respect the breadth of antecedents recognised by the Job Demands-Resources model of stress appeared appropriate for the interpretation of the study findings.

However, it is also apparent from the findings that the JD-R model is not sufficiently sensitive to adequately provide a complete and concise relational interpretation of contributory variables and associated factors. This thesis has identified a number of antecedents which indicate that the JD-R may be open to wider interpretation. For example, whereas findings that workload, poor communication/conflict issues and lack of appreciation are latent issues contributing to work-related stress and job dissatisfaction, the application of a mixed methods design revealed other stressors not evident within the JD-R which might either add to the demands or potentially buffer their impact. Such findings highlight the contribution that qualitative evaluation could make in our understanding of stress at work and its management, and support this mixed methods design in a non-Western study. Being reflexive in the analysis of the participants' views dictates stepping back and acknowledging that the model does not seem to supply a consistent way for interpreting each element, such as what are considered to be the main stressors. The literature review has highlighted the complexity of investigating work stress and satisfaction, and the identification of the main stressors and causes for dissatisfaction clearly shows variability that reflects conditions in local settings. Job stress remains a subjective topic which is open for debate (Thomadsen, 2007).

The JD-R model focuses on psychosocial demands that influence nurses' job stress (and job satisfaction), alongside job resources that refer primarily to organisational and work environmental factors such as management and leadership, role clarity and support, and to those related to reward such as opportunity for professional development and advancement. However, it is not fully suited to other significant stressors identified in this study, such as the new cultural and environmental stressors. The JD-R model makes insufficient distinction between social-cultural issues, such as the cultural discrimination in clinical areas within the KSA, between males and females in terms of personal

freedoms, or between Western and non-Western nurses in terms of equal opportunities, unequal workload, which contribute to work-related stress and low levels of job satisfaction for intensive care nurses. In addition, bias, lack of fairness, working unsocial hours and at weekends, and working far from home may all unfavourably affect staff morale and performance. From a management perspective, this should trigger and stimulate the need to buffer stress which, according to the JD-R, would likely be through support from managers, better communication, respect from physicians, flexibility, and offering part-time working or better salaries. Even so, further local stressors can arise due to feelings of being an 'outsider' and a lack of emotional support from loved ones. Obligations to children, financial stresses, and even accommodation problems can influence nurses' concentration in the clinical area. Consequently, a loop is set up in which stress created in one phase of one's life, work or home, overflows and makes coping in the new culture and work environment more difficult and frustrating (Griep, et al., 2011).

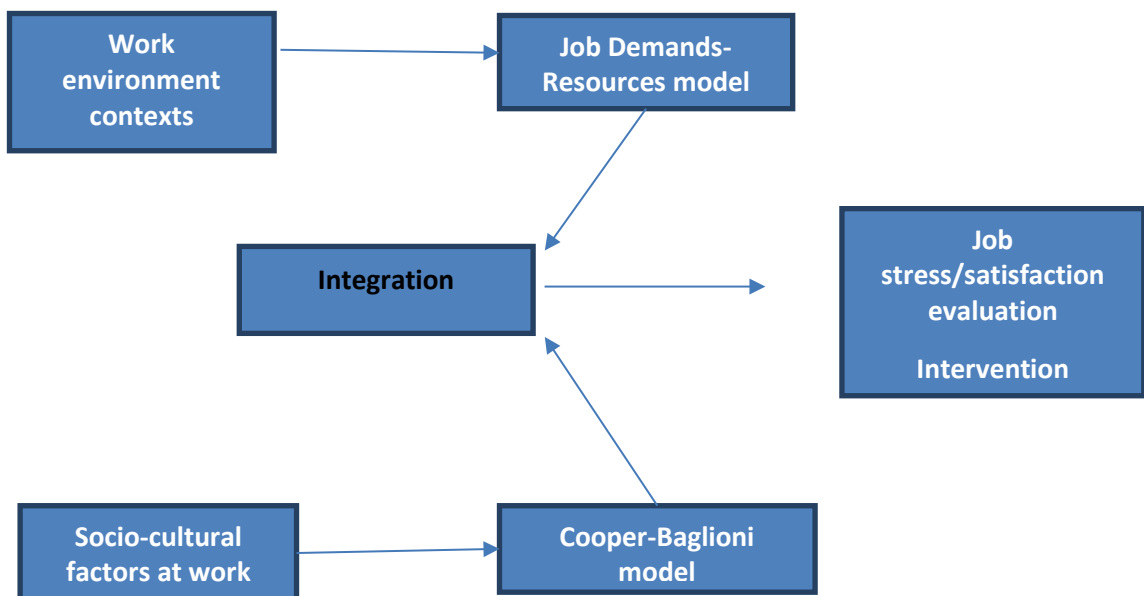
The JD-R framework alone therefore does not completely address the influence of all these demographical and social-focused issues either as stressors or, especially, as additional buffers or moderators. The participants' views on the contextual influences of the demands on work stress presented some challenges to the nurses in terms of satisfaction; the participants highlighted that increasing the work demand increased stress and decreased satisfaction leading to disengagement and high strain with low motivation, because they are linked and compete with each other. But these results suggest too that increasing job resources (appreciation, manpower, skills, salary, family support, fair treatment and equal opportunity, professional development such as developing conflict resolution skills or stress coping) would increase satisfaction and likely lead to better engagement and high motivation. Similarly, the present study also identified potential influence of demographic variables, such as level of education, years of experience, gender, and marital status.

Having completed the data analysis it therefore felt necessary to revisit the theoretical model proposed for this study and to supplement the JD-R by introducing another model that better covered these further variables. In that regard, the findings from this study suggests a merger of two complementary models: the JD-R (Demerouti et al. 2001) and the model proposed by Cooper and Baglioni (1988). The latter is described in Chapter 4, Section 4.2.3, and differs from the JD-R in that it considers both organisational and individual factors as intervening variables that act as stress moderators. Individual moderators include biographical and demographic factors, individual influences, attitude to living, styles of behaviour and ambitions. Although the JD-R was later modified (Xanthopolou et al. 2008) to incorporate personal resources such as self-efficacy and

personality it did not extend to considering such an extensive range of individual factors. Even so, the model would have to extend to a cultural sensitivity.

The Cooper and Baglioni model was not put forward as a theoretical positioning at the time of commencement of this study. In hindsight, however, it could be sensitised to those demographic, relational and, especially, cultural aspects that feature in the outcomes of this study. In their evaluation of the model John and Bright (2001) suggested that it might possibly be better utilised alongside a more specific evaluation, a suggestion that this thesis supports (Figure 7).

Figure 5: Merged Framework: JD-R (Demerouti et al. 2001) and Cooper and Baglioni (1988)



It requires further research to evaluate the validity of the merged framework illustrated in Figure 7. The diagram outlines a process of evaluation in which the JD-R is first applied to ascertain the main factors operating in the work environment towards those factors ordinarily distinguished as job demands or job resources. The outcomes of that analysis are then referred to data collected pertaining to the Cooper and Baglioni model in which intervening moderators are further considered that include individual and social factors that may operate as moderators of the interaction between job demands and job resources. By integrating the models it would, in principle, provide a more comprehensive though complex evaluation to improve insight into job stress in a given workplace environment but would also provide insights into how the interaction between

stress and satisfaction might be better understood. Such a process would have the cultural sensitivity that featured so strongly in this study in KSA yet is missing from the JD-R.

It became clear from the results analysis that the over-familiarity of most of the participants with poor situations created due to perceived hierarchical pressures may have led to a diminished appreciation of risk, which was misinterpreted or ignored. For example, most of the participants highlighted that they were familiar with understaffing because of the need for financial cost containment, creating the impression that it was viewed as an accepted part of the difficult financial situation in the hospital. Their disengagement was reflected through their attitude towards tolerating short staffing and increased workloads in favour of getting the job done. Such feelings are likely to eventually lead to further disengagement of staff. This can create a culture of normalizing the risks, where short staffing in intensive care could lead to stress and dissatisfaction amongst nurses, and potential threats such as staff injuries or stress going undetected and escaping appropriate care.

Nevertheless, analysis of the questionnaires and analysis of the participants' interviews in this study as to causes of stress and dissatisfaction remained aware of what they perceived to be key areas of difficulty. Many blamed the hospital's senior management and systems for creating stress for nurses which they believed led to an unhealthy environment and unsafe practices e.g., increased workload and staff shortages, lack of recognition and appreciation. Additionally, the analysis also blamed the context and culture of the KSA, such as the restrictions on women and the discrimination between different nationalities. However, the key point from the job stress and satisfaction surveys is to try to identify, in as much detail as possible, the potential motivators and contributors for stress and, especially, job satisfaction, rather than simply placing blame one side for the whole failure, which can send a damaging message to employees and employers alike.

7.7 Chapter Summary

This chapter has discussed and linked the data from both stages of the research to give an insight into the participants' views on the causes of work-related stress and dissatisfaction and how these stressors impacted on them in critical care units within the KSA. In the research a mixed-methods approach was applied and data from two approaches were collected and analysed separately; quantitative data were collected and analysed in the first stage, then qualitative data gathered from the second stage was

analysed before being further developed using the findings from the first stage (Creswell, 2009). The interaction of the study occurred in the discussion stage. The study revealed moderate levels of work-related stress which was linked by the participants in this research to several stressors.

The participants' views on stress and dis/satisfaction suggested that the high workload, due to staff shortages and performing extra tasks such as unnecessary paperwork remains the main cause of stress and high staff turnover for nurses in the KSA healthcare system. Increased workload due to staff shortages leading to exhaustion and feelings of stress that can affect patient safety. Some aspects of workload and staff shortages were perceived by the participants to be critical to patient safety and these aspects need urgent attention.

A further stressor was the lack of support and appreciation; nurses felt unsupported by the management, with a lack of appreciation or recognition. The analysis of participants' views suggested that there was no direct, effective communication structure between the nurses and senior members of staff in the hospital. In other words, nurses are not appreciated for their challenging and hard work but at the same time they are likely to be blamed and investigated if any problems arise. Relationships and communication with medical staff was another significant stressor for critical care nurses in the KSA; nurses felt that they were not a part of the team as they were excluded from participating in decision making regarding their patients. Most of the nurses reported that medical staff undervalued them and treated them as if they were subordinates, rather than members of the multidisciplinary team.

This thesis has also suggested new stressors that have not been identified by the established literature. Participants highlighted the effect of the culture on their stress. Being a woman working in the KSA can create significant stresses due to culture shock; participants reported that they felt stressed because they could not live as they used to live in their home country, e.g. they couldn't drive or travel alone, and at the same time they could not bring their family members to live with them either. Another cultural stressor was the unfair treatment in relation to salaries and contracts for employees; the hospital policy is to pay Western nurses almost three times what nurses from the Philippines and Middle East earn. Nurses from the Philippines and Middle East felt stressed because of their low salary compared to Western nurses, even when they were doing the same job and had the same qualifications. At the same time, nurses from Western countries also felt stressed because they felt that they are always being watched by their lower paid colleagues and felt they were being blamed for having a higher salary.

Stress and dissatisfaction are linked to one another and both play an important role in the turnover of staff and staff burnout. In addition, nursing stress and lack of job satisfaction affect the quality of care delivered to patients, which in turn has implications for promoting patients' health (Buitendach and de Witte, 2005; Shoqirat, 2008). This thesis initially presented the Job Demands-Resources model as a theoretical underpinning to understand the stress phenomenon in KSA. This chapter has proposed a merger of two models (the JD-R and Cooper/Baglioni models) so drawing on the strengths of each to provide insights into structural and socio-cultural elements that are operating and their interactions to cause stress or to buffer it

The concluding chapter that follows brings together all aspects of the thesis and includes a reflexive account of the whole research process and importantly recommendations for future research.

Chapter Eight

Conclusions

8.1 Introduction

This chapter brings the thesis to conclusion; I have included a section on recommendations and importantly a reflective section which identifies strengths and weaknesses in methodology and methods together with the part I played in undertaking the whole research. I finally present recommendations for further practice and research and how I intend to publish this research and present it to a wide audience.

There is no doubt that the KSA is extremely reliant on immigrant nurses to provide necessary health care services to the Saudi public. With the continuous deficit in nursing manpower and the international race to procure nursing services, the Saudi healthcare system and its organizations are at risk. Immigrant nurses (ICU nurses) come with their own cultural norms, beliefs, behaviours, clinical backgrounds and languages which are often completely alien to those of the local people and those of their new working environment; such differences put massive stress and pressure on nurses.

The aim of this research was to examine and explore perceived job stress and satisfaction among intensive care nurses in the KSA. The study setting was two large hospitals in Riyadh region. To investigate the challenges, two research approaches were applied, namely quantitative questionnaires and qualitative semi-structured interviews. Job stress and dissatisfaction are vital signs of job burnout and at the same time, work stress and dissatisfaction also affect patient safety, which reflects negatively on healthcare institutions and organisations. The focus of this study aims to stimulate awareness of the issues and to draw them to the attention of the issues nursing healthcare leaders in the KSA and possibly worldwide.

The theoretical framework informing the research was the Job Demands-Resources (JD-R) theoretical model which the researcher considered to be the most appropriate for this research on the justification of its adaptability, its widespread acceptance, and on the grounds of its ability to explore the psycho-social enquiry pertaining to feelings, concepts, perceptions, views and practices relating to job stress among ICU nurses.

8.2 Contribution to knowledge: Main Results and Implications

Much research (e.g. Bakker, et al., 2005; Kirkaldy and Martin, 2000; Nowrouzi, et al., 2015; Evans, et al., 2016; Mauo, et al., 2016; Al Nusai r, 2017) has confirmed and reported that nursing is by its very nature a profession that is subject to high levels of stress. Documented sources of stress, and low job satisfaction, include the characteristics of patient care, which differ between clinical specialities, and factors within the work environment which may impact on the capacity of nurses to deliver quality care and also which can impact on their own well-being particularly their mental health. ICU nurses in this research reported moderate overall levels of work stress. Other empirical research has also reported that, overall, nurses perceived their job to be moderately stressful (e.g. Wheeler and Riding, 1994; DePew, et al., 1999; Lee, 2003). Unfortunately, it is not feasible to make direct comparisons between these nursing studies on the phenomena of stress because work environments are not directly comparable and even less so when considering differences between international health care systems. This is not to say that some findings from this study are not transferable or, to an extent, generalizable as factors themselves are largely recognisable should they present an issue but this study has focused on the KSA in which the outcomes identified some unique contexts for workplace stress. Little is understood concerning job stress and its impact in KSA where a large proportion of nurses are employed from other non-Arabic countries so posing potential cultural issues for those employees. By identifying those cultural contexts and influence on perceived stress and job satisfaction, and application of the methodology to do that, this study makes a valuable contribution to understanding job stress and satisfaction in KSA, and potentially in a wider international perspective, and supports the mixed methods approach applied.

It is probable that nurses tend to be comparatively resilient to the effects of job stress. Nurses remark that most stressors are inseparably linked to their occupation, and as a result they do not perceive them to be predominantly important (Evans, et al., 2016). This study involved the measurement and exploration of levels of job stress and satisfaction for ICU nurses working in the KSA, the importance of which is that it offers reliable and validated information with which to plan changes within the participating nursing units. As such this research provides a foundation from which ICU nurses in KSA might improve the way towards managing job stress and dissatisfaction.

The study's qualitative findings validated some of the main quantitative results regarding the occurrence of job stress in almost all themes; some outcomes were not corroborated or extended by the qualitative findings and, following discussion of those with academic

supervisors, were omitted for the purposes of this thesis but may be revisited in future study..

The qualitative aspect of the study was particularly valuable and useful in identifying how stressors affected ICU nurses themselves, their patients and the hospital organization. The researcher endeavoured to gain a trusting relationship with the participants so that they felt at ease during the one-to-one interview interaction, allowing them to express their feelings openly and comfortably. This helped nurses to feel able to open up in the interviews and express in depth their views and conceptions about job stress arising from their work.

Some nurses focused on the impact of these stressors on their anger, attitudes and relationship with physicians. Other nurses were worried and concerned about effects on patient care and outcomes. While some stressors are linked to elements of nursing (e.g. workload and extra documentation), most of the nurses reported that one of the main causes of stress came from organisational factors, specifically related to management's unrealistic expectations of nurses, accompanied by a lack of fairness and lack of appreciation and recognition.

Most of the ICU nurses commented that the physicians on their units should demonstrate more respect for the skills and knowledge of nurses and should treat them as part of the team, rather than just subordinates; this finding was more prominent in the qualitative stage, though a few nurses reported that some physicians at the two participating hospitals did indeed respect and appreciate nurses and treated them as a part of the team. Researchers have reported that role conflict and ambiguity are positively correlated with job stress and dissatisfaction, leading to disengagement, low institutional loyalty and increased psychological stress. It is vital therefore that the spectrum of nurse-physician relationships must be addressed in these hospital sites (Al-Nusair, 2017).

When exploring lack of fairness and discrimination as main stressors for ICU nurses in the KSA, the quantitative method failed to report any significant findings and showed that lack of fairness and discrimination was not a significant stressor or problem. However, in the qualitative phase of the study, it emerged very strongly during the interviews that participants were particularly aggrieved by a sense of discrimination and lack of fairness between similar groups of nurses. A report produced in 2012 by the International Federation for Human Rights (FIDH), stated that immigrant workers to the KSA are completely at the mercy of their employers who withhold their passports and restrict their freedom of movement. They are not allowed to change their job and cannot leave their place of work. Some employees do not receive their wages and are generally neglected, whilst Palese, et al. (2016) reported that protection for migrant employees is almost non-

existent. Discrimination in the work place has been connected with several symptoms of mental health associated with high levels of job stress and dissatisfaction (Selcuk, 2015). Discrimination-linked stress has also been revealed to correlate with biological measures such as high blood pressure (Popoli, et al., 2012; Goette, et al., 2015).

The findings in this study therefore highlight the need for, and the importance of, cultural competency in relation to minimising the potential for job stress. If this is ignored, the corollary is that a lack of appropriate orientation and training combined with the cultural diversity found amongst ICU nurses and patients will lead to a host of issues and problems for ICU nurses.

A further contribution from this study relates to identification of a theoretical model suitable for settings where there is cultural sensitivity. This study initially introduced the Job Demands-Resources model on the basis that it has been widely applied and validated in many settings, particularly in Europe, and that it is a 'balance' model by which evaluation considers resources that may buffer impacts of stressful job demands. This study has exposed a weakness in the model as the inclusion of personal psychological resources (self-efficacy, personality; Xanthopolou et al. 2007) does not extend far enough to consider broader demographic and psychosocial factors that may also be influential both as buffers and as interacting factors that may mediate the link between job stress and job dissatisfaction. This thesis proposes a combination of the JD-R with a model that is more sensitive to those factors, in this instance the Cooper and Baglioni model is put forward as a possible suggestion. However, this will require further research to substantiate and validate.

8.3 Strengths of the Study

The scope and size of this research study was significant: 421 critical care nurses from two hospitals completed the questionnaire and 19 face-to-face interviews were carried out. In addition, the numbers of critical care units in each of the two hospitals and the access that I was able to negotiate to so many critical care nurses, was indispensable in carrying out the research. The hospitals chosen as study sites reflected the multicultural diversity of hospitals in the KSA, covering a wide geographical area of the capital, Riyadh. Moreover, this research was conducted in one of the largest Arabic-Islamic countries, which in itself facilitates an original contribution to the research literature. Locating the study in two hospitals also reduced the likelihood of emphasising single-site issues, and this makes the findings more transferable.

The mixed-methods approach to research used in this study has several strengths in its design. Firstly, quantitative questionnaires were used to identify and measure perceived levels of stress and job dissatisfaction amongst critical care nurses, whilst also exploring factors associated with this. This is the most frequently-used approach to work environment evaluation. Reliable and validated instruments were used for this purpose but, whilst productive, they can only provide information as per the questions asked. Subsequent qualitative, semi-structured interviews were used to undertake a deeper exploration of the issues and to provide a greater understanding of these stressors particularly within the specific cultural context. The use of mixed-methods research allowed for a variety of information providing a breadth of data which could also be triangulated. As noted, the interview data also extended beyond the information obtained from the questionnaires and this was key to the final outcomes of the study. As far as I can ascertain, this is the first study to have examined the perceived levels of work-related stress and job satisfaction amongst critical care nurses in the KSA which helps the decision makers in the KSA's movement to identify the effect and impact of stress on nurses' turnover rate and staff shortages.

As a mixed methods study the design required a large sample for reliable quantitative analysis (Stage1) but pragmatically a much smaller sample for qualitative analysis (Stage 2), so presenting a considerable differential. Any impact of this was minimised by the sampling strategies. According to inclusion criteria the eligible research population across the two hospitals was of the order of 1200 ICU nurses (Section 5.6.2.1). Power analysis for the quantitative data (Stage 1) indicated a need to engage with 400 nurses; the 421 who took part therefore exceeded that threshold and represented 35.1% of the eligible population. The sample profile in Stage 1 (quantitative), identified in Table 11 in Chapter 6, comprised a breadth of pertinent demographic variables including, for example, gender, marital status, years of experience in KSA, and national origin. For the qualitative data 20 nurses were initially recruited but 19 drawn from both hospitals actually took part, sufficient for data saturation. The sample profile for Stage 2 (Table 45 in Chapter 6) reflected that of the sample in Stage 1, apart from not involving Saudi nurses, reflecting social norms for males engaging females individually in KSA. There were some differences in proportions, for example the smaller number of nurses undertaking shift work, an issue related to difficulties in accessing nurses face to face when on night shift work. Demographic factors in the Stage 1 participants therefore were largely reflected in the Stage 2 sample.

Ethical requirements in the UK and in some international journals requires researchers to obtain separate consent for participation in interviews, which may also include consent from the participants to quote their views in any subsequent reports or articles. The

participants in this study consented to take part in the questionnaire survey and in the interviews, in two different and separate processes of consent. This can be considered as one of the strengths of the study because obtaining only one form of consent may influence further publication and dissemination of the findings in relation to this thesis.

For those in global leadership who are investigating nursing shortages and immigration to the KSA, this study opens a window into the culture and work status found in the KSA, but not seen by the outside world. The study supplies themes centred on the lived experience of immigrant nurses in a unique culture and environment in KSA. Participants identified the main factors for leaving their home countries, the issues that only international recruits experience and the experiences that make them both satisfied or dissatisfied in their work.

8.4 Limitations of the Study

Whilst this study has contributed to an understanding of the perceived levels of work-related stress and job dissatisfaction amongst critical care nurses in the KSA, it does have some limitations which could be addressed by further research.

Stage 1.

The greatest issue for Stage 1 involved the self-reporting of stress and satisfaction measurements, which was based on quantitative self-assessment surveys. One of the weaknesses of self-reported surveys about work-related stress and job satisfaction is that they seek to quantify subjective measures of participant perception and normally provide only cross-sectional information, as in this study. The latter means that a 'snapshot' is obtained of issues deemed a priority for participants on that day. Moreover, the questionnaires did not give participants the opportunity to explain or elaborate on their answers further, which open questions would have allowed. Furthermore, whilst participants were asked to complete the questionnaires independently, the researcher could not be with them whilst they were doing so, to ensure that they understood the questions and to ensure that the instructions were correctly followed, in particular to complete the survey tool individually. Most participants completed the questionnaires whilst undertaking their normal, busy duties and this may have affected how diligently they did this.

Furthermore, participants were recruited from two major hospitals in Riyadh region, and from a range of type of ICUs (adult, surgical, neonatal, paediatric), in order to maximise the magnitude of responses. Stressors are likely to be affected by differences between different types of ICU. Findings therefore cannot necessarily be generalized to all

intensive care nurses in the KSA or even in Riyadh. However, the large sample recruited from two localities dilutes any local issues specific to the setting. The study also was concerned with types of stressors ordinarily potentially identifiable in most health care work environments and so there are likely to be many similarities in sources of stress described here even though there are differences in clinical practice among ICU units. The quantitative findings therefore are at least likely to be 'transferable' as in many instances issues will like be recognisable by other ICU nurses, especially in KSA.

The use of qualitative interviews in Stage 2 also provided various data that overcame some of the limitations of using surveys in Stage 1 by bridging any gaps in the study's results, and also to expand upon the issues for ICU nurses.

Stage 2.

In the qualitative stage of the research, adhering to an interview schedule helped the researcher to use time efficiently but the design of the schedule might not have allowed for exploration of a wider range of information, which may have elicited richer responses in relation to participants' strategies for coping with stress. A further limitation is that English was not the first language for some participants and they were answering the questions in broken English, which might have limited the accuracy of information and data. At the same time, the novelty of the subject posed a limitation on explaining some questions during the interviews. I tried to overcome these potential issues by explaining and simplifying my questions and using some techniques to explain exactly what the question meant. I explained some questions by creating similar scenarios and stories about the main ideas involved. This required modification of some questions or restructuring the wording of the question in a way that participants were able to understand.

Interviews are a two-way process, subject to influences on the interactions and interpretations of questions and responses both by participants and the researcher. As the investigator and an 'insider' intensive care nurse my personal world-view and professional experiences may have sub-consciously misinterpreted answers from nurses although I was conscious of this potential issue and member checking of the interview transcripts did not evidence any occurrences. I believe that participants were honest with me, and any bias that junior participants may have unconsciously provided was likely to have been counterbalanced by the more senior nurses.

Ethical issues of beneficence, non-maleficence and confidentiality were addressed within every single step in this thesis. In addition, at no stage do I believe that participants were coerced to take part, for example by being put forward by managers for participation

in this study. Further, many found the process a psychological relief which I appreciated. None of the participants were known to me as friends or direct colleagues and interviews would have been shortened, and a referral suggested, if data had been considered serious.

Although the study sample in this research entailed a large group of participants, the aim of the study was to engage with expatriate nurses working in KSA and so no Saudi nurses were included in the interviews. Also, social norms related to gender in KSA has implications for a male researcher interviewing female Saudi employees. Epistemologically, recounting subjective experience and/or perceptions means that findings from interviews cannot be expected to be generalizable but as a mixed methods study it is the integration of both the qualitative and quantitative findings that generates the main study outcomes and conclusions. The lack of a Saudi nurse perspective in Stage 2 would not have been detrimental to the exploration of the cultural impacts for immigrant nurses, but it has potential implications for the subsequent integration. In retrospect, inclusion of Saudi nurses might have been preferable, although the scale of the sample size differential suggests that the Stage 1 outcomes per se would still be relevant. However, there may possibly have been an influence on qualitative data that could not be integrated, for example the political circumstance for immigrant nurses (see Section 7.3).

The Stage 2 sample also excluded nurses with less than three months' experience in the KSA. While these nurses were likely to have been highly stressed, this may have been as a result of different demands and resources which the research was not designed to explore. Therefore, if these nurses had been included, the perceived levels of stress might have been higher, but perhaps related to completely different stressors associated with inexperience. Finally, the sample included intensive care nurses and excluded other multi-disciplinary health care professionals who work in intensive care, so the results are unable to determine whether it is the job of nursing *per se* which is evaluated here, or whether it is the critical care setting itself that is a stressful place to work in for all groups.

8.5 My Reflections on Conducting this Research

During the research process I have faced many challenges and difficulties which were overcome with the support of my clinical and academic supervisors. The challenges of ethical approval and two R&D approvals were particularly frustrating, requiring close attention to fine details. The request from one of the hospitals to remove the nationality component from the demographic survey was a big challenge for me as I felt this information was important and necessary for the research. However, by a process of

negotiation and with the support of my clinical supervisor, who is an employee as a researcher in one of the sites, it was agreed to compromise by including the geographical area (rather than the country of origin) for the participants. Recruitment of females for Stage two of the study was also challenging for me as a male because of the balance required between enthusiastically motivating individuals to participate and applying undue pressure. This was due to the conventions pertaining to relationships between males and females in the KSA.

A further challenge arose when interviewing female participants in a private room within the hospital, as Saudi culture does not allow one-to-one meetings between males and females unless there is a relative of the female present. This was the main reason why Saudi female nurses were not recruited for in this research. Some of the participants also hesitated to participate in the study even though they were immigrants to the KSA, to avoid conflict with the Saudi authorities, but this was overcome with the support of my academic supervisor and assurances given by the unit managers who volunteered to be available next to our room during the interviews. During the interviews I noticed that some of the female participants were anxious of being interviewed by a male in the KSA, but I concentrated on maintaining a professional attitude and continued to foster trust with the participants, reminding them that they could stop the interview any time and withdraw without giving reason. In fact, I felt some anxiety myself because of the apprehensions and worries they had about sitting alone with me in the same room, but I acted professionally at all times and focused on the interview to make the interviewees feel comfortable.

I responded positively to any discomfort shown by the participants, such as feeling upset or becoming tearful or mute for a few seconds, especially when I asked questions about family and loved ones. In these situations, I asked them if they wanted to stop or move on to another question, or offered them water and assured them that they were free to not answer sensitive questions, or that they could terminate the interview without penalty simply by informing me of their decision. A plan was made with the unit managers to offer counselling and psychological support from occupational health for staff who might have needed help after their interview, if for example they were suffering from homesickness or mood swings. Overall, my personal appearance and stance will have influenced how all the participants viewed me and this will have shaped what they shared with me, and ultimately the research outcomes.

Finally, time management and balance with my own work life have proved big challenges at times, especially with the limited timeframe I had for gaining ethical approval. This

stage was particularly protracted, but necessarily so in order to protect the rights of the participants and help ensure greater quality in the research process.

8.6 Conclusions and Way Forward

In conclusion, the current study makes a valuable contribution to the concept and phenomena of job stress and satisfaction among immigrant ICU nurses in the KSA. The current research confirmed that ICU nurses in the KSA are stressed and dissatisfied. The most immediate stressors in terms of the work environment for ICU nurses were workload, and lack of appreciation and recognition (support) but cultural factors (including discrimination and lack of fairness) especially appeared important in regards to job satisfaction. The significance of this primarily emerged in the qualitative phase of this study (Stage2) and opens up a new avenue for exploration of job stress and satisfaction. A secondary, important finding from this study is that it exposed a significant weakness in the Job-Demands-Resources model, and perhaps also others that are focused almost entirely on work environment factors. Whilst the CCNSS survey applied in this study is appropriate to evaluate sources of job stress in the work environment it did not have sufficient items to identify sociocultural sources for immigrant ICU nurses working in hospitals in the KSA. This more than anything justifies the mixed methods approach that was applied in this study, and reinforces that more qualitative research is needed in this field.

The findings were considered in relation to the Saudi culture and the international context/origins of the participating nurses. They form the basis for the following recommendations for nursing practice and for further research.

Findings from this study identify a current need for international-focused research approaches that report on the psychosocial and working environments in their entirety. Therefore, countrywide and worldwide efforts should be made to address this systematically in close co-operation with local authorities and global stakeholders. This thesis highlights that, in order to understand psychosocial hazards (and other emerging job-related concerns), they should be explored as part of a stream of action and policies feeding down from the national or international level. At the same time, we need to make decision-makers aware of the need for policies and procedures that will protect the well-being of nurses wherever they work and will recognise unique cultures and contexts such as in the KSA.

In today's world, there is an urgent need for equality and equal opportunity, but much action is required in many countries before such ideals can be implemented or completed. With the will to apply vision and objectives to achieve the standards possible, there is no reason why equal rights for employees should not be implemented. As countries develop, we should consider and pay attention to the rights of national and non-national employees and treat them with the respect, dignity they deserve for fair and equal treatment.

8.6.1 Recommendations for Nursing Practice and the Healthcare System

A review of the existing literature, together with this new research has provided considerable evidence of management issues and gaps in current policy and practice. In the KSA, which is different from many Western countries, counselling and psychological care for employees has not been an area of concern for health authorities or healthcare providers. The findings from this study have identified several stressors and causes of dissatisfaction among critical care nurses. Recognising these stressors will help and assist in the planning and development of coping strategies for work related stress. Schools of nursing and other specialised organisations in the KSA can play a vital role in exploring and recognising the stressors that critical care nurses face, and create intensive educational programs that suit nurses' needs. These organisations can work regularly and closely with research units in hospitals in order to make sure that they provide nurses with the latest evidence and knowledge on stressors and coping strategies.

The findings of this study have demonstrated that nurses experienced an increased workload due to staff shortages. New and effective retention strategies should be adopted and implemented to decrease nurses' workloads and maintain high levels of staff retention. Intensive and comprehensive educational courses which focus on effective time and task management are urgently needed. Importantly, mandatory educational courses about the culture of the KSA and cultural diversity are needed for all international staff who come to work in the KSA.

The findings also demonstrated a lack of effective leadership skills in clinical areas. Supportive and effective nursing leaders are needed to inspire and motivate nurses to further their development and to enhance the spirit of teamwork amongst and between them. Many studies have reported that nurses feel more confident about positive outcomes when there is support from leaders and opportunities for professional development. Supportive leadership skills in healthcare professions at all levels are

associated with increased motivation for learning and higher quality performance, which in turn produces higher quality patient care. In addition, a comprehensive education programme which focuses on effective communication skills for nurses, physicians and other healthcare professionals should be mandatory, to prevent and minimize conflicts as far as possible. Recent studies have shown that most of the conflict in healthcare areas is the result of misunderstandings between employees. Such programmes are absent in the curricula of Saudi nursing and medical schools.

Full time work and shift rotation between day and night are usually the norm for most nurses; however, family responsibilities and commitments are very important, especially for female nurses. Part time and flexible working conditions would help them and increase their levels of job satisfaction. Therefore, hospital management should be required to consider the merit of planned career paths, peer review monitoring systems, flexible working hours and continuous professional growth and development with productivity payment for recruits (Kamal, et al., 2012, Al-Hosis, et al., 2013). As most expatriate nurses in the KSA are female, the recommendation for the government is to provide flexibility to allow family visas and assisted accommodation for families, to enhance and promote workplace stability.

8.6.2 Recommendations for Further Research

As noted above in the discussion of the limitations of the study, this research is considered to provide a good opportunity and basis from which to undertake further exploration of the issues raised. Further research may involve comparable studies to explore the interactions between stress and dissatisfaction, particularly with regard to the potential for cultural understanding as a means to moderate stress impact. It is recommended that this study is repeated in different regions in the KSA and that subsequent studies should ensure the representation of Saudi nurses and incorporate additional variables. Although Saudi nurses were not represented in this study it is recommended that samples in any future studies should include comparisons between Saudi nurses and non-Saudi nurses. This study revealed new stressors that have not been mentioned in the existing literature (notably sociocultural stressors). It is recommended that further research explores this type of stressor and explains the variables associated with it.

Finally, after having completed this study, I plan to publish the results and findings in a respected international journal and to present at national and international conferences. Presentation of a part of the study at two conferences has already taken place, as a result of which I have plans for a wider and more comprehensive future research project. Unfortunately, the standard of scientific journals in the KSA is not high and therefore,

after publishing this study in a respected journal, I will select parts of the thesis for publication in literature that can be accessed by nurses in the KSA, such as, local and internationally-recognised nursing journals, and hospital/medical and nursing council publications.

8.6.3 Recommendations for Education

It is clear from the literature and the findings of this study that nursing in the KSA is stressful, especially for intensive care nurses. There is a need to provide continuous training and education (including workshops) for all members of healthcare teams, especially nurses, on leadership, communication skills, stress coping mechanisms, professional advancement and changes in technology and hospital practice; and to provide higher postgraduate qualifications to promote research and enhance the academic status of the profession. This study focused on immigrant nurses employed in the KSA but the cultural issues are two-way and findings from this study also have implications for overseas nurses employed in the UK.

8.7 Summary of Recommendations

The findings of this study have identified several areas for improvement and development including:

- Further research to be conducted on work-related stress and job satisfaction in nursing in the KSA particularly with respect to professional, relational, and socio-political/cultural issues.
- Implementation of an effective retention strategy e.g. improving satisfaction by offering salary bonuses, increasing staffing levels, improved fairness and social justice, and providing opportunities for professional development to avoid staff shortages and inappropriate workloads.
- Recognizing, appreciating and rewarding outstanding performance.
- Implementing effective leadership styles in all aspects of clinical work.
- Continual education and training for nurses including communication and relational skills within a multi-cultural workplace.
- Providing flexible working hours and agreed shift patterns which consider family needs.

- Flexibility in providing visas for nurses' families and visits to the home country for employees.

8.8 Dissemination / Publications

Dissemination and feedback of the results of this research has already begun: I have presented the findings at an International Critical Care Conference in the KSA. The positive feedback for my presentation was welcome. The conference title was 'Speaking Up and Raising Concerns' which attracted the particular attention of a participant from Oman who is an intensive care manager and who would like to conduct research in his unit to be able to compare the results with mine, with the objective of improving the turnover and retention rates at his hospital. In addition, the results will be used to promote the importance of recognising nursing stressors in the country through the publication of the study results in different professional, peer-viewed nursing, social and management journals.

Finally, at the request of the ethical committees of the two hospitals that were chosen as study sites for this research, I will present the findings at the hospitals involved in this study and I am planning to invite commissioners, healthcare professionals, educational institutions and stakeholders. This type of interaction with stakeholders will be key to disseminating the results and promoting the implementation of the study findings.

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Appendix I: Main nursing activities in a normal clinical day for nurses in Level 2 and Level 3 intensive care

07:00 The nurse arrives to the shift. Received handover from the nurses in-charge on the night shift, then receives one-to-one hand over from the nurse who was looking after the assigned patient overnight.

07:30 - 08:00 Start morning medication round. Hourly observation (if needed) Checking the medication that are being infused, patient medication lines, and doctor's orders. Start administering morning medication

08:00 - 09:00 Helping out in the washing the allocated patients (along with the auxiliary nurses). Check and prepare for any procedures that the patients are due to have today or soon.

The pharmacist arrives at the ward. Start with the doctor rounds, checking the drug chart and ordering the necessary drugs from the pharmacy.

Serving the patient breakfast (if patient is able to eat and drink) observation for those needing hourly observation Hourly observation

Prepare any medications which are due to run out soon, check for any procedures that the patients are due to have today or soon.

The pharmacist arrives at the ward. Start with the doctor rounds and checking the drug chart and ordering the necessary drugs from the pharmacy. Serving the patient breakfast (if patient is able to eat and drink).

09:00 - 10:00 Walking with doctor rounds, checks for any urgent doctor's order (usually band 6 nurse). Some doing mid-morning observations. Morning break (15 minutes). Hourly observation. Standing with doctors' rounds (usually band 6 nurse).

Morning break (15 minutes)

10: 00 - 12: 00 Finishing off washing the patients, changing the patient's sheets. Any ongoing doctors or pharmacist' query (e.g. patient discharges). observation for those needing hourly observation. Any ongoing doctors' or pharmacist queries.

12:00 - 13:00 Midday medication round.

Helping with patient lunch (if patient is able to eat and drink) Hourly observation (if needed). Midday medication round.

14:00 - 18:00 Afternoon observation

Visiting time (talking to family if appropriate)

Observation for those needing hourly observation.

18:00 - 19:00 Evening medication round nursing documentation. Helping out with patient dinner. Hourly observation. Helping with patient dinner if patient can eat and drink.

19 :00 - 20:00 Handing over to nurses in the next night shift (the nurse in charge of the shift hands over to the nurse in charge of the night shift).

20:00 - 22:00 Checking the patient. Hourly observation (if needed). Checking the patient medication, forthcoming patient procedures. Administering 22:00 medications

03:00 - 05:00 Hourly observation (if needed), taking blood samples and starting the morning care.

Appendix II: Thank you letter for potential, additional participants



Dear [Nurse' name]

Re: **Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia.**

Thank you very much for agreeing to participate in this study. I appreciate the effort and time you are willing to contribute.

I have had a high number of responses from nurses across a range of backgrounds. For this reason, I would like to hold your name in reserve, so that, should I need to come back to you at later stage of the study, I can contact you again. Of course, if at this stage this is not convenient for, you can withdraw your offer of participation.

I will be in touch with you again to let you know either way. In the meantime, many thanks for your willingness to participate in this study. Your offer of time and expertise is greatly appreciated.

Kind Regards

Appendix III: Participant information sheet (Stage 1)



Participant Information Sheet (Questionnaires)

Project Title:

Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia.

Invitation

You are being invited to take part in a research study to explore the relationship between work stress and job satisfaction amongst intensive therapy nurses in the Kingdom of Saudi Arabia (KSA). This research is being undertaken as part of a doctoral research project at Anglia Ruskin University in the UK. Before you decide whether to take part or not, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with friends and colleagues if you wish to.

What is the purpose and value of the research?

The aim of this proposed research is to explore the relationship between work based stress and job satisfaction amongst full-time ITU nurses in multiple clinical centres in acute hospitals in the KSA.

Work stress has become an important issue which has not been fully explored in KSA. Your views and experiences in this regards are of particular importance for understanding the causes of work stress and what we can do to improve job satisfaction, which could reflect positively on patient safety.

Why have I been chosen?

You have been invited to participate in this research because you are an ITU nurse with at least three months' experience of working in KSA. You have knowledge and experience which will help to inform this research.

Do I have to take part?

No. It is entirely up to you to decide whether to take part or not. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. You are also able to withdraw from the research even after you have given informed consent.

What are the possible disadvantages and risks of taking part?

There are no physical risks from participating in this research. The questionnaires you are asked to complete will be anonymous so no-one, not even the researcher, will know what you have said. Your identity will not be known.

There is a small risk that you might become upset whilst completing the questionnaires. Please remember that you can't withdraw your questionnaire after you submit it to the researcher because it's anonymous research. However, if do not want to complete and return the questionnaire, you can discard it before you submit it.



**Anglia Ruskin
University**

Cambridge & Chelmsford

Will my taking part in this study be kept confidential?

Your name will not be used at all in the study. The questionnaires will be completed and returned anonymously. No-one will know that you have participated in this research.

What do I have to do if I participate in this research?

You will be invited to complete and return three questionnaires:

1. A questionnaire asking about you, your background and experience.
2. A questionnaire measuring work stress.
3. A questionnaire measuring job satisfaction.

These questionnaires will be sent to 800 ITU nurses working in the KSA and should take no longer than 20 minutes to complete.

What will happen to the results of the study?

The results of this research will be submitted to Anglia Ruskin University in fulfilment of the requirements for a doctoral programme. In addition, the findings will be disseminated widely in the KSA and will be submitted for publication to a profession journal. The findings might also be presented at a professional conference. It will not be possible to identify anyone who has participated in this research from the reports or publications.

Who is organising and funding the research?

This research is being organised by Rani Shatnawi under the supervision of Dr Leslie Gelling and Dr Andy McVicar. The research is self-funded by the researcher

Who has reviewed the study?

This study has been reviewed and approved by the Faculty of Health, Social Care and Education Research Ethics Panel at Anglia Ruskin University and has been approved by the Research Advisory Council in your hospital.

What I have to do if I want to take part

If you are happy to participate in this study, then you will be contacted through your manager who will circulate and collect the answered questionnaire. In addition to that, boxes with questionnaires and empty boxes with the name of the research displays on it will be left on your staff's room. All contact data of the research will be given to the manager if you need and more explanation or assistance regarding this research.

Please make sure that by completing and returning the questionnaire, you are consenting to this research. Your agreement to participate in this research will not compromise your legal rights should something go wrong. Also, if you decided to take part in this study, there are no special precautions you must take before, during or after taking part in this study.

Contact for further information

I would like to thank you for your consideration of my request. For further information, feel free to contact me or my supervisors at the following addresses:



Rani Shatnawi
PhD Student
Faculty of Health, Social Care & Education
Anglia Ruskin University
rani.shatnawi@student.anglia.ac.uk

Dr Leslie Gelling
Reader in Research Ethics
Faculty of Health, Social Care & Education
Anglia Ruskin University
leslie.gelling@anglia.ac.uk

Dr Muna Anani (local Supervisor)
Education Coordinator
Nursing Development & Saudaisation
P.O. Box 3354 Riyadh 11211

Appendix IV: Ethical approval from Anglia Ruskin University



Anglia Ruskin
University

Cambridge & Chelmsford

Cambridge Campus
East Road
Cambridge
CB1 1PT

T: 0845 271 3333
Int: +44 (0)1223 363271
www.anglia.ac.uk

28 February 2012

Rani Shatnawi
117 Rossington Avenue
Borehamwood
Hertfordshire
WD6 4LB

Dear Rani,

Re: Application for Ethical Approval

Project Number: 11/039

Project Title: 'Work stress and job satisfaction amongst Intensive Therapy nurses in the Kingdom of Saudi Arabia'

Principal Investigator: Rani Shatnawi

Thank you for resubmitting your documentation in respect of your application for ethical approval. This has been reviewed by the Chair of the Faculty (of Health, Social Care & Education) Research Ethics Panel (FREP) in advance of the next scheduled meeting in March.

I am pleased to inform you that your research proposal has been approved by the Faculty Research Ethics Panel under the terms of Anglia Ruskin University's *Policy and Code of Practice for the Conduct of Research with Human Participants*. Approval is for a period of three years from 28 February 2012.

It is your responsibility to ensure that you comply with Anglia Ruskin University's Policy and Code of Practice for Research with Human Participants and specifically:

□□□The procedure for submitting substantial amendments to the committee, should there be any changes to your research. You cannot implement these changes until you have received approval from FREP for them.

□□□The procedure for reporting adverse events and incidents.

□□□The Data Protection Act (1998) and any other legislation relevant to your research. You must also ensure that you are aware of any emerging legislation relating to your research and make any changes to your study (which you will need to obtain ethical approval for) to comply with this.

□□□Obtaining any further ethical approval required from the organisation or country (if not carrying out research in the UK) where you will be carrying the research out. Please ensure that you send the FREP Secretary copies of this documentation.

□□□Any laws of the country where you are carrying the research out (if these conflict with any aspects of the ethical approval given, please notify FREP prior to starting the research).

□□□Any professional codes of conduct relating to research or research or requirements from your funding body (please note that for externally funded research, a project risk assessment must have been carried out prior to starting the research).

□□□Notifying the FREP Secretary when your study has ended.
Information about the above can be obtained on our website at:
<http://web.anglia.ac.uk/anet/rdcs/ethics/index.phtml/>

Please also note that your research may be subject to random monitoring by the committee.

Please be advised that, if your research has not been completed within three years, you will need to apply to our Faculty Research Ethics Panel for an extension of ethics approval prior to the date your approval expires. The procedure for this can also be found on the above website.

Should you have any queries, please do not hesitate to contact me. May I wish you the best of luck with your research.

Yours sincerely

Dr Paulette Luff
For the Faculty (of Health, Social Care & Education) Research Ethics Panel
T: 0845 196 3544
E: paulette.luff@anglia.ac.uk
cc:
Dr Tim Schafer (FREP Sponsor)
Dr Leslie Gelling (Supervisor)
Beverley Pascoe (RESC Secretary)

Appendix V: Ethical Approval from Hospital A



مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre

مؤسسة عامة Gen. Org.

OFFICE OF RESEARCH AFFAIRS

32933 27894 MBC 03

INTERNAL MEMORANDUM

To: Muna Anani, PhD
Education Coordinator
Nursing Development & Saudization

Date: 27 Rabi Al Thani 1433
20 March 2012

From: Fowzan Al Kuraya, MD, FAAP, FACMG
Acting Chairman
Clinical Research Committee
Office of Research Affairs

Ref: ORA/0336/33

Subject: Proposal # 2111 111 : New Proposal
Work Stress and Job Satisfaction amongst Intensive Therapy Unit (ITU) Nurses in The Kingdom of Saudi Arabia

Further to our memo (ref. ORA/0199/33, dated 31 January 2012), your reply (email dated 05 March 2012) regarding the concerns to the above cited proposal was reviewed by the Clinical Research Committee (CRC) on 20 March 2012.

It is my pleasure to inform you that the CRC accepted your reply and recommended the approval of the proposal as submitted.

On behalf of the CRC, I wish you the best in your research endeavors.

Thank you.

Appendix VI: Ethical Approval from Hospital B

Kingdom of Saudi Arabia
Ministry of Health
King Fahad Medical City
Research and Publication Center
Academic and Training Affairs



المملكة العربية السعودية
وزارة الصحة
مدينة الملك فهد الطبية
مركز البحوث والنشر
الإدارة التنفيذية للشؤون الأكاديمية والتدريب

April 08, 2012
ERRC Number: 12-019

Ms. Rani Shatnawi
E-mail: Rani_nFh@yahoo.co.uk

Dear Ms Rani,

It is my pleasure to inform you that the External Research Review Committee, a subcommittee of the Institutional Review Board, has approved your study titled: **"Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia"**.

Please be informed that in conducting this study, you as the Principal Investigator are required to abide by the rules and regulations of the Government of Saudi Arabia and KFMC/ERRC. The approval of this proposal will automatically be suspended on **April 8, 2013** pending the reapplication to renew the approval. You also need to notify the ERRC as soon as possible in the case of:

1. Any amendments to the project;
2. Termination of the study.

Please observe the following:

1. Personal identifying data should only be collected when necessary for research;
2. The data collected should only be used for this proposal;
3. Data should be stored securely so that only a few authorized users are permitted access to the database;
4. Secondary disclosure of personal identifiable data is not allowed.

We wish you every success in your research endeavor.

Sincerely,

Dr. Mohamad AlTannir
Head of External Research Review Committee
Institutional Review Board
King Fahad Medical City
Riyadh, KSA

Appendix VII: Ethical approval from the author of the Critical Care Nursing Stress Scale

Subject: Re: Approval for Critical Care Nursing Stress Scale (CCNSS)

From: joanne_sawatzky@umanitoba.ca

To: rani shatnawi

Date: Wednesday, 07 December 2011 12:01:45

dear rani...

i am attaching a pdf copy of the CCNSS; you have permission to use this scale - my only request is that you reference it as mine in your work; good luck with your project

regards

j

Jo-Ann V. Sawatzky RN, PhD
Associate Professor
Faculty Development Coordinator
Faculty of Nursing, University of Manitoba
e-mail: joanne_sawatzky@umanitoba.ca
Ph: [204] 474-6684
FAX: [204] 474-7682

On 2011-12-07, at 1:28 AM, rani shatnawi wrote:

Dear Dr Sawatzky,

My name is Rani Shatnawi, currently working in the Kingdom of Saudi Arabia as a ICU manager and I am a PhD student in Anglia Ruskin University , I would like to ask your permission to use your attached Critical Care Nursing Stress Scale survey as a reference and as a tool for our research entitled Work stress and job satisfaction amongst Intensive Care Unit (ICU) nurses in the Kingdom of Saudi Arabia .

I know that it will help me a lot for the study that I am planning to conduct.

Your kind approval for this matter is highly appreciated.

Sincerely Yours

Rani Shatnawi



CCNSS.pdf
79.4kB

Appendix VIII: Ethical approval from the author of the McCloskey/Mueller Satisfaction Scale



Permission to use form:

This gives permission to use the McCloskey/Mueller Satisfaction Scale (MMSS) to Rani Shatnawi for the purpose as stated in the request dated 15/12/2011.

The instrument may be reproduced in a quantity appropriate for this project.

Signed:

Sue Moorhead

Sue Moorhead, Associate Professor, College of Nursing

Date: December 21, 2011

Appendix IX: Demographic Questionnaire

Thank you for agreeing to participate in the research. The valuable information you provide will hopefully assist the trust in providing a supportive work environment. Please continue to complete the questionnaires only if you:

- a) **are currently a staff nurse in an intensive therapy unit (ITU) in Saudi Arabia;**
- b) **have worked as a staff nurse for at least three months in ITU during the last year.**

Be assured that all your responses are anonymous

1. Have you been employed as a staff nurse in an ITU for at least three months during the last year:

- ☐ Yes
- ☐ No (if 'no' you are not eligible to participate in this research)

2. Years of experience as a staff nurse:

Years: _____
Current grade: _____

3. Gender:

- ☐ Male
- ☐ Female

4. Age:

- ☐ 20-30 years old
- ☐ 31-40 years old
- ☐ 41-50 years old
- ☐ more than 51 years old

5. Marital Status:

- ☐ Married
- ☐ Single
- ☐ Divorced
- ☐ Widow
- ☐ Other, please describe: _____

6. Educational level:

- ☐ Diploma
- ☐ Degree
- ☐ Masters
- ☐ Other, please describe: _____

7. Time employed as a nurse in ITU: _____ years _____ months

8. Time employed as a nurse in ITU the KSA: _____ years _____ months

9. Work Status:

- ☐ Part-time
- ☐ Full-time
- ☐ Other, please describe: _____

10. Usual shifts pattern:

- ☐ Day
- ☐ Evening
- ☐ Night
- ☐ Rotating
- ☐ Other, please describe: _____

11. Average number of hours worked per work week: _____

12. Average number of patients cared for per shift: _____

13. category

- A
- B
- D
- M

Thank you again for participation and completing the questionnaires.

Please return the completed questionnaires to your manager or put it in the designated empty boxes with the name of the research on it.

Appendix X: Critical Care Nursing Stress Scale Questionnaire

CRITICAL CARE NURSING STRESS SCALE

On the following 3 pages, you will find a list of common critical care nursing stressors. Respond to each of the corresponding Likert scales using the following questions and definitions as your guide. Please do not leave any items blank:

Frequency: How often does this stressor occur?

never				very often
0	1	2	3	4

Intensity: How stressful is, or would this stressor be for you?

not at all stressful				very stressful
0	1	2	3	4

Threat: Threatening situations are stressful. They are characterized by negative emotions and harm or loss is anticipated. How threatening is, or would this stressor be to you?

not at all threatening				very threatening
0	1	2	3	4

Challenge: Challenging situations are stressful. They are characterized by positive emotions. There is potential for growth or gain from the encounter. How challenging is, or would this stressor be to you?

not at all challenging				very challenging
0	1	2	3	4

CRITICAL CARE NURSING STRESS SCALE: Cont'd:

Stressor Category	Frequency	Intensity	Threat	Challenge
I. <u>MANAGEMENT OF THE UNIT</u>				
1. Inadequate staffing...	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
2. Apathetic, incompetent medical staff.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
3. Apathetic, incompetent nursing staff.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
4. Precepting students...	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
5. Emergencies, transfers, admissions.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
6. Unavailability of physicians.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
7. Shifts, scheduling...	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
8. Interruptions, paper work.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
9. Patients not needing ICU.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
10. Charge position.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
11. Floating out of unit..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
12. Lack of continuity in patient assignments...	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
II. <u>INTERPERSONAL RELATIONSHIPS</u>				
13. Personality conflicts.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
14. Disagreements with MDs re patient treatment..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
15. Unresponsive nursing leadership.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
16. Lack of respect from physicians.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

CRITICAL CARE NURSING STRESS SCALE: Cont'd:

Stressor Category	Frequency	Intensity	Threat	Challenge
17. Lack of teamwork among staff.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
18. Communication problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
19. Lack of teamwork with other departments....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
III. <u>PATIENT CARE</u>				
20. Emergencies, arrests..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
21. Unnecessary prolongation of life..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
22. Critical, unstable patients.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
23. Death of "special" patients.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
24. Inability to meet patients' needs.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
25. Inability to meet family needs.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
26. Responsibility, decision making.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
27. Chronic patients.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
28. Uncooperative patients	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
29. Routine procedures....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
IV. <u>KNOWLEDGE & SKILLS</u>				
30. Inadequate knowledge..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
31. Unfamiliar equipment..	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
32. Lack of experience & skill.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
33. Unfamiliar situations.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
34. Inadequate continuing education.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

CRITICAL CARE NURSING STRESS SCALE: Cont'd:

Stressor Category	Frequency	Intensity	Threat	Challenge
V. <u>PHYSICAL WORK</u> <u>ENVIRONMENT</u>				
35. Insufficient/mal-functioning equipment.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
36. Work space.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
37. Noise.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
38. General work environment.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
39. Too many people.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
40. Lighting.....	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

Appendix XI: McCloskey/Mueller Satisfaction Scale (MMSS) Questionnaire

McCloskey/Mueller Satisfaction Scale (MMSS)

Description

The scale has 31 items capturing eight types of satisfaction: satisfaction with extrinsic rewards, scheduling, family/work balance, co-workers, interaction, professional opportunities, praise/recognition, and control/responsibility. Each item is rated on a five point Likert scale. The scale was designed to be used to assess the satisfaction of hospital staff nurses.

Background

In 1974 McCloskey studied nurses who had resigned from jobs and asked what rewards would have kept them on the job. Scale items were constructed and categorized as either safety rewards (potential against dangerous threat), social rewards (need to belong), or psychological rewards (autonomy, responsibility, recognition, and appreciation) based on the theories of Maslow and Burns. The 1974 scale was updated and revised and used in a 1987 study (McCloskey & McCain). The previous versions of the scale had reported face and content validity and test-retest and alpha reliability. The current version of the scale is based on rigorous examination of the measurement characteristics reported in a 1990 publication (Mueller & McCloskey). Factor analysis supported the current 8 subscale structure. These 8 subscales, however, do support the original three theoretical dimensions: safety rewards are captured by the three satisfaction factors of extrinsic rewards, scheduling and family/work balance; social rewards have taken the form of satisfaction with co-workers and interaction; psychological rewards are represented by satisfaction with professional opportunities, praise/recognition, and control/responsibility.

Measurement characteristics (also see the article by Mueller and McCloskey)

Reliability:

Chronbach alphas for each of the eight subscales range .52--.84; the alpha for the global scale is .89. Smaller alphas belong to subscales with fewer items. Test-retest correlations between measurements taken at 6 months on the job and at 12 months are consistently at the same level or lower than the alphas. This is as expected because the comparison between 6 months reflects actual change as well as consistency.

Construct Validity:

Confirmatory factor analysis of the original three dimensions followed by exploratory factor analysis resulted in the creation of eight subscales. An oblique rotation routine was used in conjunction with the maximum likelihood common factor analysis program supplied by SPSSx. The eigenvalue criterion of one was used to determine the number of factors and .40 was the cutoff for item loadings on factors. The subscales were assessed to determine if they correlate as theoretically expected with other variables: task variety, autonomy, feedback, friendship opportunities, task identity, and intent to stay. Moderate positive correlations found for all expected relationships demonstrate construct validity.

Criterion-Related Validity:

The subscales were correlated with the Brayfield-Rothe general job satisfaction scale and with subscales from Hackman and Oldham's Job Diagnostic Survey (JDS). Correlations on subscales ranging from .53 to .75 for similar dimensions indicate criterion-related validity. Correlations of the overall scale with the Brayfield-Rothe was .41 and with the JDS general dimension was .56. These indicate that the McCloskey/Mueller Satisfaction Scale may be a more valid measure of nursing satisfaction compared with the other scales that were not designed for nurses.

Scoring

Each item is scored from 1 to 5 with the 5 indicating the highest level of satisfaction. For each subscale, scores are summed and divided by the number of items to attain a mean. An overall means for the global scale can be attained as a general measure of nursing satisfaction. The subscales are:

satisfaction with extrinsic rewards
three items: 1,2,3
satisfaction with scheduling
six items: 4,5,6,8,9,10
satisfaction with the balance of family and work
three items: 7,11,12
satisfaction with co-workers
two items: 14,15
satisfaction with interaction opportunities
four items: 16,17,18,19
satisfaction with professional opportunities
four items: 20,21,27,28
satisfaction with praise and recognition
four items: 13,24,25,26
satisfaction with control and responsibility
five items: 22,23,29,30,31

References

- McCloskey, J. (1974). Influence of rewards and incentives on staff nurse turnover rate. Nursing Research, 23, 239-247.
- McCloskey, J. C. & McCain, B. E. (1987). Satisfaction, commitment and professionalism of newly employed nurses. Image: Journal of Nursing Scholarship, 19(1), 20-24.
- Mueller, C. W. and McCloskey, J. C. (1990). Nurses' job satisfaction: A proposed measure. Nursing Research.

McCloskey/Mueller Satisfaction Scale (MMSS)

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How satisfied are you with the following aspects of your current job?

Please circle the number that applies.

		Very Satisfied	Moderately Satisfied	Neither Satisfied nor Dissatisfied	Moderately Dissatisfied	Very Dissatisfied
1.	salary	5	4	3	2	1
2.	vacation	5	4	3	2	1
3.	benefits package (insurance, retirement)	5	4	3	2	1
4.	hours that you work	5	4	3	2	1
5.	flexibility in scheduling your hours	5	4	3	2	1
6.	opportunity to work straight days	5	4	3	2	1
7.	opportunity for part-time work	5	4	3	2	1
8.	weekends off per month	5	4	3	2	1
9.	flexibility in scheduling your weekends off	5	4	3	2	1
10.	compensation for working weekends	5	4	3	2	1
11.	maternity leave time	5	4	3	2	1
12.	child care facilities	5	4	3	2	1
13.	your immediate supervisor	5	4	3	2	1
14.	your nursing peers	5	4	3	2	1

		Very Satisfied	Moderately Satisfied	Neither Satisfied nor Dissatisfied	Moderately Dissatisfied	Very Dissatisfied
15.	the physicians you work with	5	4	3	2	1
16.	the delivery of care method used on your unit (e.g. functional, team, primary)	5	4	3	2	1
17.	opportunities for social contact at work	5	4	3	2	1
18.	opportunities for social contact with your colleagues after work	5	4	3	2	1
19.	opportunities to interact professionally with other disciplines	5	4	3	2	1
20.	opportunities to interact with faculty of the College of Nursing	5	4	3	2	1
21.	opportunities to belong to department and institutional committees	5	4	3	2	
22.	control over what goes on in your work setting	5	4	3	2	1
23.	opportunities for career advancement	5	4	3	2	1
24.	recognition for your work from superiors	5	4	3	2	1

		Very Satisfied	Moderately Satisfied	Neither Satisfied nor Dissatisfied	Moderately Dissatisfied	Very Dissatisfied
25.	recognition of your work from peers	5	4	3	2	1
26.	amount of encouragement and positive feedback	5	4	3	2	1
27.	opportunities to participate in nursing research	5	4	3	2	1
28.	opportunities to write and publish	5	4	3	2	1
29.	your amount of responsibility	5	4	3	2	1
30.	your control over work conditions	5	4	3	2	1
31.	your participa- tion in organizational decision making	5	4	3	2	1

Appendix XII: Participant Information Sheet (Stage 2)



Participant information sheet (Interview)

Project Title:

Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia.

Date:

Dear participants

Invitation

You are being invited to take part in a research study to explore the relationship between work stress and job satisfaction amongst intensive therapy nurses in the Kingdom of Saudi Arabia (KSA). Before you decide whether to take part or not, it is important for you to understand why the research is being done and what it will involve. Please take your time to read the following information carefully and discuss it with friends and colleagues if you wish to.

What is the purpose and value of the study?

The aim of this proposed research is to explore the relationship between work based stress and job satisfaction amongst full-time ITU nurses in multiple clinical centers in acute hospitals in the KSA.

Work stress has become an important issue which has not been fully explored in KSA. Your views and experiences in this regards are of particular importance for understanding the causes of work stress and what we can do to improve job satisfaction which could reflect positively on patient safety.

Why have I been chosen?

You have been invited to participate in this research because you are an ITU nurse with at least three months' experience of working in KSA. You have knowledge and experience which will help inform this research.

Do I have to take part?

No. It is entirely up to you to decide whether to take part or not. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. You are also able to withdraw from the research even after you have given informed consent.

What are the possible disadvantages and risks of taking part?

There are no physical risks from participating in the interviews. Your identity will be protected and the information you supply will only be used in the data analysis and the drafting the research findings.

Will my taking part in this study be kept confidential?

Your name will not be used at all in the study. When analysing the data, identities of the participants will always be anonymised by numbers and pseudonyms. Data will be anonymised so that you cannot be identified. All information that is collected about you during the course of this research will be kept strictly confidential. If the interview is digitally recorded, I will keep the digital audio files of the interviews on my work computer, with password protection which is only accessible by me, and I will not share them with anyone. However, all recorded interviews will be sent to external transcriber for transcription. Therefore, your name may be disclosed to the person who is going to transcribe your interviews scripts. The individual undertaking the transcription will be aware of the need to ensure confidentiality. All information that is collected about you during the course of the research will be kept strictly confidential

What does the study involve?

- I will be conducting face-to-face interviews with those who are willing to be interviewed.
- The interviewee will choose the interview date, time and venue. Otherwise the researchers are happy to set up date, time and venue for the interview which is mutually convenient for the interviewee and the researcher.
- The interviews will last between 30 – 45 minutes and will be digitally recorded (with your permission).

- This research is expected to take place over a period of 8 – 9 months from June 2012 to March 2013.

What will happen to the results of the study?

The material generated from the questionnaires and the interviews will be analysed and become part of a written research submitted to Faculty of Health and Social Care at Anglia Ruskin University to complete as a part of completion my PhD degree. And the results will be submitted to the high management in each hospital been involved in this study. It is anticipated that these results will help to identify the gap in work stress and put a strategy to reduce stress and improve the satisfaction among IUT nurses. In addition, few publications are expected to be produced from this study. The nature of these publications would most likely be, but may not be limited to, scholarly research destined for an academic audience, such as conferences and Journal papers. Publications will be available for you to look at upon request.

Who is organising and funding the research?

The research is self-funded by the researcher (student).

Who has reviewed the study?

This study has been reviewed and approved by Faculty of Health, Social Care and Education Research Ethics Panel at Anglia Ruskin University and has been approved by the Research Advisory Council in your hospital.

What I have to do if I want to take part

If you are happy to participate in this study, then please send an e-mail to rani.shatnawi@angliastudent.ac.uk indicating your name and your willingness to participate in the study. You will be contacted via e-mail thereafter to arrange a convenient date, time and venue in your hospital for the interview. Your agreement to participate in this research will not compromise your legal rights should something go wrong. Also, if you decided to take part in this study, there are no special precautions you must take before, during or after taking part in this study.

Contact for further information

I would like to thank you for your consideration of my request. For further information feel free to contact me at the following address:

Rani Shatnawi RN, MSc

Faculty of Health and Social Care

CM1 1SQ

Tel:

e-mail: rani.shatnawi@angliastudent.ac.uk

Or:

Dr Leslie Gelling PhD MA BSc(Hons) RN FRSA (First Supervisor)

Reader in Research Ethics, Faculty of Health, Social Care & Education, Anglia Ruskin University, Cambridge (UK)

Editor, 'Nurse Researcher: The International Journal of Research Methodology in Nursing and Health Care'

Chair, Cambridge South REC, National Research Ethics Service

Chair, Faculty Research Ethics Panel, Faculty of Health, Social Care and Education, Anglia Ruskin University

Or:

Dr Muna Anani (Local Supervisor)

Education Coordinator

Nursing Development & Saudaisation

P.O. Box 3354 Riyadh 11211

Appendix XIII: Interview Guide



GENERAL QUESTIONS

- Age
- Job Title
- Nursing Graduate
- Number of experience as ICU Nurse
- Number of experience in your institution
- Nationality
- Religion
- Marital Status
- Education Level
- Average Number of working hour
- Nursing Ratio

JOB STRESS

- How do you find or describe the support from the management?
- Explain to me when the managers and supervisors criticize your work?
- Can you talk to me when you can cross unfamiliar situation or dealing unfamiliar machine at work?
- Can you describe how you feel when you don't agree with the patent treatment plan?
- Describe how do you feel towards not adequately trained to do what you been asked?
- Given the chance for the education and training?
- How do you describe your inter-professional relationship and other colleagues and other discipline?
- How you find the communication between teams at work?
- Relationship with physician?
- Can you explain the stress that you may encounter as a nurse when you have too much work?
- Dealing of sick patients or patient who deteriorating in your shift?

- Dealing of chronic patient?
- Prolonging the life of patient
- How you feel about emergency admission or transfer?
- Explain to me how do you feel when a patient or relative abuse you verbally or physically?
- Have you been harassed or abused?
- How is you feeling for being not having the same offer package and salary from the same job and responsibilities you're doing?
- Being discriminated because of your race, religion and sex?
- What do you think the most stressful thing for you?

SATISFACTION

- Do you get compensated for being working weekends? How do you feel about that?
- Explain to me how will be your satisfaction for not able to work part time?
- How you feel about the child care facilities and maternity leave in your institution?
- Have you been given the chance for participating in research?
- Have you been given the chance for education and training
- Have you even received a thank you letter to recognize and appreciate your hard work?
- Are you planning to leave or are you looking for new job?
- What made you think to leave?
- Tell me three areas of improvement that would improve your satisfaction and make you stay?

Appendix XIV: Research Proposal

Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia.

Introduction

Job stress is a term which the majority of people are familiar with, but at the same time it is notoriously hard to define. There are numerous definitions in the literature, and the terms frequently used to describe feeling of fatigue, distress, and inability to cope. The Health and Safety Executive (HSE) in 2004 defined occupational stress as “The adverse reaction people have to excessive pressure or other types of demand placed on them”. Regardless of the definition of the occupational stress, there is no doubt that many workplaces, particularly the hospitals are stressful organizations to work in.

Job stress in the KSA is a real concern, particularly, in health care facilities. Job stress policies, measures in enhancing working environment and policies on equalities are not well established or studied, it is a topic that is not taken seriously enough by decision makers therefore, the extent of the problem is not defined. The findings of other studies on job stress could not be generalized due to the fact that KSA have a unique work environment, culture and working conditions. The researcher believes that the study findings that were conducted outside KSA could not be generalised to nurses working in the KSA for different reasons such as (the sources of job stress, culture, working condition and work colleagues), and most importantly because of the presence of staffs from different countries that come to KSA with different beliefs, school and backgrounds. Due to all of the mentioned facts added to the fact that there is no similar study that looked at the same variables that I am planning to investigate in KSA, and that KSA represents a particular cultural working environment which employs a substantial number of expatriate nurses to satisfy its needs, makes it an excellent country in which to conduct research on nurses.

Researcher and supervisory support

The researcher has a Masters degree in Critical Care. During his Masters studies, he conducted a descriptive non-experimental study (quantitative) with critical care nurses exploring their knowledge of weaning of mechanical ventilation. The applicant works as the Head Nurse in critical care areas. This work will be supervised by Dr Leslie Gelling and Dr Andy McVicar and local supervisory support will be available from Dr Muna Anani, who is the Education Co-ordinator at King Faisal Specialist Hospital & Research Centre.

Background:

Nurses' job stress and satisfaction are becoming an increasing concern for health care organisations. Job stress and dissatisfaction can result in nurses leaving their jobs or changing their careers. The replacement of experienced and licensed professionals is often lengthy, costly and time-consuming. Globally, many health care systems are undergoing major changes and nurses have worked towards improving practice, care and outcome by using scientific evidence-based practice. Newell (2002) described how nursing, like medicine, frequently relies on expert opinion that is less scientific. Given its centralised management system (Institute for the Future, 2000), the Saudi health care system is experiencing many changes such as the “Saudisation” or the drive to increase the number of nursing staff who are native Saudi citizens. At the same time there is an increased emphasis on providing high quality nursing care with controlled

cost. This presents a challenge for policy-makers in the Saudi Health Care system, as the vast majority of the nursing staff in the country comes from outside the Kingdom of Saudi Arabia (KSA).

Williams (2003) states that “there is a moderate inverse relationship between job stress and job satisfaction” when he examined the job stress, job satisfaction and intent to leave employment among maternal-child health nurses.

Literature review

Employers and employees at hospitals wanting at all times to provide a continuous excellent care toward their patients, sometimes this is difficult and causes some conflict to nurses to apply. Despite the vast volume of published literature and a recent increase in the number of studies conducted on job stress, gaps in knowledge are still present. Organisations today increasingly focus upon decreasing stress and improving the work environment in the clinical area (Kennedy and Grey, 1997; Azizi, 2009). Organisations also consider quality as essential to their survival and by improving working conditions; quality may in turn improve (Deckard, et al., 1988). Therefore, stress in the work place is a major concern for administrators and managers, in particular, those working in the health care, job stress has been also defined as “.....the process that arises where work demands of various types and combinations exceed the person's capacity and capability to cope.” HSE (2008) (Health & Safety Executive UK). The HSE (2008) estimate that 13.5 million working days are lost to stress, each new case of work stress leads to an average of 31 days off work. Work related stress costs in the UK approximately 3.7 billion pounds every year. The need to tackle stress is considered and recognised by the English law. Under the Health and Safety at work Act 1974 and the management of health and safety at work regulations 1999. After extensive search in KSA for similar ACT, policies or regulations that recognise occupational stress, the author was not able to identify any.

Job stress among nurses has been documented for more than forty years (Christian, et al., 2010; Menzies, 1960), and job stress between the nursing populations has been reported in various countries. These countries include, but not limited to; United State of America (USA), the United Kingdom (UK), Canada, Germany, Holland, Turkey, Israel, Singapore, Japan, New Zealand, Australia and Philippines. Overall the reviewed literature supported that stress is a long-standing issue for nurses regardless of their nationalities, type of nursing training, location or type of clinical or non-clinical work (Cox and Leiter, 1994; Allen, et al., 2002; Aiken, et al., 2002b).

AbuAlRub (2004) undertook a correlational descriptive study to measure the effect of perceived job related stress on perceived job performance among nurses in different departments and investigated the effect of social support from co-workers on job stress, job performance, and the stress-performance relationship. Questionnaires were completed via the internet. The large convenience sample consisted of staff nurses (n=2509) who were accessed over the internet using their email address. Study results indicated a negative correlation between job stress and social support that is, participants who experienced more social support from co-workers reported less job stress. Equally, increased levels of stress resulted in decreased perceived job performance. It is worth mentioning that the use of a Web-based survey to collect the data provided only a convenience sample, which limits the generalizability of the results. Other limitations of using Web based research are potential multiple completion of the survey tool and the difficulty of computing responses (Duffy, 2002). AbuAlRub (2009) repeated the study on 288 nurse's hospital in Jordan, finding was similar to the first study.

McCloskey's (1990) study, found that social support is correlated positively with job satisfaction, work motivation, commitment to the organisation and intention to stay among 189 nurses who filled the questionnaire at 6 months after employment and at 12 months. Only 138 nurses filled the questionnaire at 12 months. Social integration was

also found to buffer the bad effects of low autonomy. The autonomy–integration interactions for intent to stay and organisation commitment at six months and job satisfaction at 12 months were statistically significant.

Research aims:

The aim of this proposed research is to answer the following question:

“What is the magnitude of the work based stress and job satisfaction among full-time ITU nurses in multiple centres in acute hospitals in the KSA and its associate factors?”

Objectives:

- To identify the critical care nurses’ views on the factors influencing job satisfaction and work-based stress.
- To explore if there any differences in job satisfaction and work-based stress of Saudi and non-Saudi critical care nurses.

And to identify strategies that might be implemented to minimize work-based stress and increase job satisfaction

Methodology:

A mixed method approaches (quantitative and qualitative) will be used in this research including a descriptive correlation study design using a questionnaire method (Stage 1) and semi-structured interviews with smaller sub-group of those nurses (Stage 2).

Data collection

Stage 1

In the first stage, the total of 800 consecutive ITU nurses who are met the criteria will be approached and invited to consent and to participate in this study. Their demographic characteristics will be collected using a questionnaire designed by the researcher. The variables included in this form will be gender, marital status, shift worked, time commitment, nationality, level of education, age and years of experience in nursing and in current area of work. The information about the hospitals will be: type of units, unit average daily census, unit’s organizational structure, model of nursing care delivery, unit/ ward’s decision-making style, financial situation of the hospital, and dominant changes that influence the hospital.

Stage 2

In the next stage, Semi-structured interviews will be used for this study. Semi-structured interviews are conducted with a fairly open framework which allow for focused, conversational, two-way communication. Qualitative interviews usually operate with the model that knowledge is constructed rather than straightforwardly excavated (Mason 2004).

Sample size

Stage 1

According to the statistical power, the study is expected to recruit a minimum sample of 438 participants to detect percentage of stress out power 0.7% - .85% with power 80% and type 1 error rate 0.005. Because of risk factors for Stage 1 I will distribute 800 questionnaires.

Stage 2

The sample size for the qualitative part of this research will be determined by the emerging themes, seeking to achieve theoretical saturation. It is anticipated that it will not be necessary to recruit and interview more than 40 participants to this part of the research.

Instruments and tools

Nurse's job satisfaction will be defined as satisfaction with: extrinsic rewards, scheduling, family/ work balance, co-workers, interaction, professional opportunities, praise/ recognition, and control/ responsibility. Nurses' job satisfaction was measured by the Mueller/McCloskey Satisfaction Scale (MMSS) (1990).

Nurses job stress will be defined according to Critical Care Nursing Stress Scale (CCNSS) which has been developed and widely used in Canada and Singapore although using Likert Scale.

The CCNSS was developed by Sawatzky (1993) and was modified from the Stress Audit (Bailey, Steffen and Grout, 1980) consisting of questionnaire to indicate ICU nurses' perceptions of stressful and satisfying aspects of their work.

The interview questions will be develop to explore more the findings from the questionnaires, and the question will focus on employees experience of job stress in KSA and the hospital, their coping mechanism, it's impact on their performance and satisfaction, sources of job stress, effect of job stress on their intention to stay, and the moderating effect of social support from work colleagues and family on their stress level. One important aspect which are the staff feelings in regards to equality.

Data analysis

For the quantitative data, the Statistical Package for the Social Sciences (SPSS) will be used to analyze data. Statistical methods included means, standard, median, standard deviation and one way analysis of variance (ANOVA).

for the qualitative data, Qualitative data will be analysed using thematic analysis has been applied to analyse their data and meet the needs of exploring the lived experiences, perceptions and the absolute reality of the participants in their social context (Braun and Clarke, 2006). This process was done to analyse the written material into meaningful themes using applied rules. In qualitative research, the data analysis tends to unfold in a non-linear or unpredictable fashion (Patton, 2002).

ETHICAL CONSIDERATIONS

Bryman (2004) stated that ethical implications should be addressed and considered in every research stage, including participant voluntary participation, confidentiality and informed consent. Research ethics and governance approvals will be sought and obtained from the Faculty Research Ethics Panel (FREP) at Anglia Ruskin University and the Research and Development Departments at every hospital participating in this research.

All the study participants will voluntarily choose to participate and they are given the right to withdraw at any time without giving a reason. Participants in Stage 1 (questionnaires) will be anonymous and the data collected in Stage 2 (interviews) will be anonymised during transcription. All data will be stored securely and confidentiality maintained. Data (from questionnaires and interviews) will be stored in a locked cabinet and password protected computers.

Dissemination:

A written report on the finding from this study will submitted to high management in each hospital involved in this research. In addition, few publications are expected to be produced from this study. The nature of these publications would most likely be scholarly research destined for an academic audience, such as conferences and Journal papers. Publications will be available for you to look at upon request.

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Appendix XV: Consent Form



**Anglia Ruskin
University**

Cambridge & Chelmsford

Participant Informed Consent Form

Title of Project:

Work stress and job satisfaction amongst Intensive Therapy Unit (ITU) nurses in the Kingdom of Saudi Arabia.

Rani Shatnawi

rani.shatnawi@student.anglia.ac.uk

Thank you for agreeing to participate in this research. Before being interviewed, I would like you to sign this consent form to indicate that you have read and understand the participant information sheet and understand what your involvement in this research will involve.

Please initial box

1. I confirm that I have read and understand the information sheet dated [.....] (version.1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason.

☐

3. I understand that information collected during this research will be kept securely and that my contribution will be anonymised.

☐

4. I have been provided with a copy of this form and the Participant Information Sheet.

☐

5. I understand that the information provided in the interview will be digitally recorded by the researcher.

☐

- Would you like a copy of the summary of the research findings posted to your -mail/ home address?

No Thanks

Yes- Please provide home address_____

_____	_____	_____
Name of Participant	Date	Signature

_____	_____	_____
Name of the Researcher	Date	Signature

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