A STUDY OF PERCEPTIONS OF WORKPLACE STRESS AMONG REGISTERED NURSES WORKING IN SELECTED CARE AREAS IN PUBLIC HOSPITALS IN UMGUNGUNDLOVU DISTRICT PROVINCE OF KWAZULU NATAL

A DISSERTATION SUBMITTED TO THE SCHOOL OF NURSING-UNIVERSITY OF KWAZULU NATAL –HOWARD CAMPUS IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR COURSEWORK MASTERS DEGREE IN MENTAL HEALTH NURSING

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DATE: 04 DECEMBER 2013 – CORRECTIONS

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DECLARATION

I, Majola Ntombizakhona Clementine declare that the description of the perception of workplace stress among Registered nurses working in selected care units is my own work. It has never been submitted for any other purpose in any other university. Sources of information used in this work have been acknowledged by means of a reference list.

Signature: _____ Date: _____

ACKNOWLEDGEMENT

My special gratitude and appreciation goes to the following persons:

Professor N.S. Gwele and Mrs Lungie Mkize for their passionate guidance and assistance at the beginning of the study.

Professor N.G. Mtshali and Mrs A. Nokes, Biostatician Ms Tonya Oosthuisen and Mrs Fikile Nkwanyana for their valuable assistance and guidance during data analysis stage.

Professor B. Bhengu and Professor P. Brysiewicz for their time and encouragement with the latter part of the study.

The Department of Health, KwaZulu Natal, Executive Management and Staff in ublic hospitals for granting permission to conduct the study.

The participants in public hospitals for their consent and valuable contribution.

My late mother, Mrs Thembani Elsie Masikane for her unconditional love acceptance and support.

My three sons Thabo Ayanda and S'thandile Majola for their support, understanding and the space that they allowed.

My friend Mrs Annie Sivraman for her support through the difficult and challenging episodes.

Dr N.V. Mkhize my colleague for assisting me with my project during the correction phase.

Mrs Denise Carolus, the medical librarian for assisting me with information search for corrections of the research report.

May the Creator bless each and every one of them abundantly.

DEDICATION

This dissertation is dedicated to my family, colleagues, friends and all those who have offered guidance and support, for perseverance and resilience towards the actualisation of the goal.

ABSTRACT

Nurses work in the environment which presents excessive psychological demands with a low to moderate job control. Depending on the level of social support they receive from the colleagues and supervisors, they perceive their work circumstances to be laden with excessive job demands, in the absence of social support. On the other hand they perceive their work circumstances to be facilitating, with less perceptions of workplace stress, in the presence of social support. Workplace stress results from a combination of factors. There is a three way interaction between job demands (qualitative aspects) job control (skill discretion and decision-making latitude) and social support. Social support moderates the perceptions of workplace stress from the work environment among registered nurses. A Job Content Questionnaire and Perceived Stress Scale instrument was used to describe the levels of perceived stress among registered nurses. There was a significant relationship between job demand and selected care units the participants were working in. There was no significant relationship between job control and the units the participants were working in. The study revealed a highly significant relationship between the population and race and job demand. Age and job demand was highly significant, the younger the nurses' age was, the higher the incidence of perceived workplace stress. There was a highly significant relationship between job demand and social support. The study did not detect the direction of the relationship among variables. Hypothesis testing revealed that the distribution of perceived workplace stress was normal, thus the null-hypothesis was retained. Availability of social support, capacity building and real world preparation for nurse training, a combination of qualitative and quantitative approaches, were the recommendations for nursing practice, management, education and future research.

OPSOMING

LISTS OF ABREVIATIONS

AIDS……Auto Immune Deficiency Syndrome
HIV……Human Immunodeficiency Virus
JCQ……..Job Content Questionnaire
PSS…….Perceived Stress Scale
ICN……International Council of Nursing
ILO……..International Labour Organisation
EAP……..Employee Assistance Programme
OSD…….Occupation Specific Dispensation
DPSA……..Department of Public Service and Administration
SANC……...South African Nursing Council
PN……Professional Nurse
RN……..……...Registered Nurse
SPN……..Senior Professional Nurse
CPN……Chief Professional Nurse
OM……..Operational/Unit (Nurse) Manager
NSM……..Nursing Service Manager

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1. 1 INTRODUCTION

Since the late 1990s, health and occupational health research has focused on issues related to workplace safety and importantly, work stress has been identified as a significant risk both in terms of the impact on employee health but also in terms of the resulting cost to productivity within the workplace (Cousins, Mackay, Clarke, Kelly, Kelly, & McCaig, 2009). This focus has been driven by a number of imperatives including the fact that, within some professions, work related stress is seen as the single most important cause of organisational absence. Studies across different industries have shown that the caring professions such as Nursing, Medicine and Social work rate amongst the most stressful disciplines with more than 80% of staff taking at least 10 days of per year because of stress related issues (Cousins, Mackay, Clarke, Kelly, Kelly, & McCaig, 2009). The problems associated with work related stress have proved problematic worldwide and the impacts on work performance are widely documented. For example, in the United Kingdom (UK), the Health and Safety Executive (HSE) produced a Health and Safety Executive report (HSE, 2009) estimated that work-related stress costs UK employers about £353 million (R4.5 billion) per annum (in 2008/2009 prices), (Gugliemi, Simbula, Vignoli, Bruni, Depolo, Bonfiglioli, Tabanelli,& Violante, 2013). In South Africa, a similar study of the relationship between work related stress and cost to business has shown that earnings lost due to stress account for nearly as much as 10% of the gross domestic product (Jannati et al 2011). Since these calculations were done, the estimated number of days lost due to stress has more than doubled (Jones, Huxtable, Hodgson, & Price,

2013) and there is wide agreement that action is necessary. A study of global trends by the International Labour Office (2011) suggests that, up to 12.5% of all health care costs are lost via work related stress which exhibits itself as a number of unwanted work place presentations including absenteeism; lowered productivity; employee turnover; clinical errors associated with lowered employee efficacy and direct medical, legal and insurance costs. The extent of the economic impacts arising from work related stress are particularly noteworthy because it is this aspect of the discourse which represents a shared concern by employers, nursing professions and other stakeholders alike. It also further substantiates the critical importance of working to reduce the prevalence of work related stress within the nursing profession. Goldin (2004) goes as far as suggesting that, disproportionately stressed employees are one of the reasons why health care providers may underperform in their delivery of care to patient populations.

As highlighted above, the Nursing profession rates as one of the high risk professions in which work-related stress prevalence is reported most frequently. Moustaka, Theodoros and Constantinidis (2010) and Marie (2007) speak more specifically about Nursing and work related stress and in their work, they confirm the range of impacts that arise from work related stress. These include an increased risk of job dissatisfaction, burnout, early retirement and severe mental health problems among nurses working in the profession and a range of other proxy difficulties such as increased reports of workplace bullying; accidents and low staff morale, (Ruegger, Abrens, Eickmann and Falcy, 2009).

Nursing represents an important case example of a profession most affected by issues related to work stress. Firstly, the nature of the work done by nurses has been shown to be associated with increased vulnerability to work stress and like Medicine, represents one of the professions that is associated with highest rates of work related stress (Pendukani 2004). In acknowledgement of this, Shen, Cheng, Tsai, Lee & Guo (2007) assert that it is a known fact that nurses are at risk of workplace stress. Depending on the type of nursing unit

or health care facility they are placed in, some nurses are even at risk of being assaulted by their patients and colleagues. Kamchuchat, Chongsuvivatwong, Oncheunjit & Yip and Sangthong (2008) support the notion that nurses are potential victims of workplace stress owing to patient demographics and the relatives who accompany the patients to the nursing units for care. There is an increased likelihood of becoming a victim, more especially if there is low supervisory support in the workplace. While in the line of duty, these nurses are faced with task performance and timeline challenges which present in both a physical and a psychological nature. This was revealed in a study carried out among nurses who were placed in Emergency units, male nursing units, psychiatric units, community and primary health care units, and orthopeadic units (Kamchuchat, Chongsuvivawong, Oncheunjit & Sangthong, (2008).

According to Shen, Cheng, Tsai, Lee, & Guo (2007), these challenges constitute psychological workplace demands, which, among other factors, cause individual nurses to evaluate their workplace circumstances as stress provoking or as stressors. This is over and above the physical caring tasks that nurses execute. Depending on the nature and severity of the patients' illnesses, physical tasks range from complete compensation, when the patient cannot help his/herself to partial compensation, as the patient gathers strength on the recovery path. These psychological and physical demands are aggravated by the perceived lack of supervisors' support and lack of freedom to exercise independent judgment and decision-making by individual nurses. Social support in the workplace and the ability of the individual nurse to exercise independent judgment moderate the perception of stress due to these physical and psychological demands. Social support and the freedom to exercise decision-making are believed to be an additive factor assisting them to cope with the overwhelming workplace circumstances (Sehlen, Vordermark, Schafer, Herschbach, Bayerl, Pigorsch, Rittweger, Dormin, Bolling, Wypior, Zehentmayr, Schulze & Geinitz, 2009). Whatever the explanatory model one adopts to try and explain the precipitants and causal factors that precede work related stress, it is important to acknowledge that

this study will focus on the identification, description and analysis of factors that may increase risk of suffering from work-related stress.

1.2 BACKGROUND TO THE STUDY

Workplace stress is widely reported in a number of seminal studies that have looked at the profession of Nursing and in particular the existence of a range of workplace stress examples such as burnout and workplace fatigue (Bryant, Fairbrother and Fenton, 2000 and Sehlen et al, 2009). For examples, some studies have shown that nurses who perceive their workplace circumstances in terms of excessive job demands manifest behavioural and mental ill health symptoms. This view is supported by Kamchuchat, Chonsuvivatwong, Oncheunjit, Yip & Sangthong (2008). The nurses who fall into this category show signs of miscommunication with their colleagues and supervisors; some abuse alcohol and may abuse others physically and verbally, while, when it comes to their actual performance, the standards are lowered or they underperform (Kamchuchat, et al., 2008).

Nurses who are subjected to excessive workplace demands exhibit signs of ill health or imbalance, and this surfaces as prolonged absenteeism which excludes sick leave and family responsibility leave; poor teamwork spirit; work overload for the remaining colleagues; tendency to smoke; lowered body resistance and increased susceptibility to infections which is potentiated by the HIV/AIDS status of the nurse (Kamchuchat et al. 2008). Elkonin & Van Der Vyer (2001) explains this phenomenon as compassion fatigue as opposed to compassion satisfaction. Nurses who are happy in the workplace, and are content with their work circumstances and performance environment welcome challenges as they are readily able to access their coping skills

(Elkonin & Van Der Vyer, 2001). On the contrary, nurses who are reported to have compassion fatigue appear to have lost interest in and around workplace performance, display emotional exhaustion which surfaces in their poor interpersonal relationships with others and their patients, and exhibit poor or delayed reaction time in terms of decision-making and problem-solving, which results in negative patient outcomes (Elkonin & Van Der Vyer, 2001).

Sometimes referred to as secondary traumatic stress (STS), compassion fatigue represents an important concept within the work related stress discourse and is defined as condition characterised by a gradual lessening of compassion over time and is usually characterised by sufferers exhibiting a range of symptoms including hopelessness, anhedonia, constant stress and anxiety, sleeplessness or nightmares, and a pervasive negative attitude (Hooper et al 2010). In their study Hooper at al (2010) recognise compassion fatigue as the worst symptomatic presentation of work related stress particularly among health workers, where the display of compassion is a critical professional behaviour. They present alarming statistics that show that up to four in five health workers (80%) develop compassion fatigue. In one of the areas studied, 85% of emergency room nurses met the criteria for compassion fatigue (Hooper et al 2010). In another study by Beck (2011), more than one in four of all ambulance workers and up to 34% of hospice nurses displayed severe compassion fatigue. By comparison with other health care professionals, studies of mental health nurses show disproportionately high rates of work related stress or compassion fatigue, with as many of 72% of clinicians reporting anxiety and a range of other fatigue related symptoms (Culver, McKinney and Paradise, 2011).

The particular risks experienced by psychiatric nurses are restated in a related study by Ria (2005) who revealed that psychiatric nurses, who were exposed to workplace stressors, cited that they perceived their work environment to be stress-laden with the risk of assault, and it is these inherent risks within their environment which compounded the risk of developing compassion fatigue. Other dimensions noted as having significant contributory influence on compassion fatigue was working with groups with particularly

poor prognoses such as those suffering from cancers and/ or HIV/AIDS. Ria (2005) explains the social dimensions of nurses' experiences in caring for people living with Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) in South Africa. Some of the factors that are cited are: prolonged contact by nurses with patients whose physical condition demands intensive physical care and provision of emotional support. According to Smit (2005), these nurses are subjected to exhaustion and manifest indicators of workplace stress. The changing patient demographics and profiles present unpredictable recovery paths, and individual nurses perceive this as stress provoking, not only for the nurses, but for the medical doctors as well, according to Sehlen et al. (2009).

Ross (2001) further states that health care providers who work with people living with Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) experience work-related stress and anxiety. The patient circumstances, which are both physical and emotional, including reactions to their HIV/AIDS status and the reactions of the relatives, pose a form of psychological demand on the nurses' performance environment, which may be perceived as workplace stress. This is attributed to the following workplace factors: discriminatory practices against the infected, affected and inflicted, fear of contagion, or of contracting the disease and its unpredictable nature, overwhelming emotions and experiences witnessed and experienced by the families and clients in the emotional, financial, social and spiritual dimensions of health, as they feel confronted by factors they are unable to change or control, job involvement and lack of resources to enhance the quality of life for those who are Human Immunodeficiency Virus (HIV) positive, or living with Acquired Immunodeficiency Syndrome (AIDS) or people living with HIV and AIDS (PLWAHIV) (Ross, 2001).

Pendukeni (2004) supports this view and adds that, in Southern Africa, HIV and AIDS related illnesses directly affect the human resource component in

health care. Nurses make up the largest number of health care workers and the multi-disciplinary health team. Apart from the nurses having to take care of bedridden patients who are very ill, nurses themselves go through the same morbidity experiences. When the nurses themselves are absent due to illness, they reduce the number of nurses available for bedside care, which adds an additional excessive workload to the burden of those nurses who are on duty (Pendukeni, 2004).

In their seminal study nearly 20 years ago, Basson and Van der Merwe (1994) confirmed that KwaZulu-Natal (KZN) student nurses in the Midlands regions (rated high in burn-out and emotional exhaustion), expressed concerns that their patients living with HIV and AIDS posed a threat to their own health state and work life. The sample was mainly drawn from participants under the age of thirty-years (30) and from the white population. Basson and Van Der Merwe (1994) expressed a need for a cross-cultural investigation among nurses in nurse training and black population institutions. Nurses, being the largest group involved in health care service delivery, just like others, are at risk of job-related stress. The reasons for this, according to Basson and Van Der Merwe (1994), are: limited participation in decision-making, excessive workload, interpersonal relationships that are not facilitative and organisational protocols that are not accommodating of individual characteristics. These views have been supported by more recent studies such as Shen, et al. (2007) and Jannati et al. (2011).

According to the Western Cape Provincial Department of Health (2009), the shortage of nurses is a global phenomenon and as such recruitment and retention pose a challenge, as nurses seem to be attracted by better conditions of employment internationally or in the private health care sector. This situation leaves nurses with a burden of care with increasing patient or customer numbers. The South African Nursing Council (SANC) report that South African nurses serve a population of about forty seven million and has a total of 103,792 registered or professional nurses, 40582 enrolled nurses and 59574 enrolled nursing auxiliaries. It is not very clear even from the

perspective of the South African Nursing Council, as to the number of nurses that are actually practicing in South Africa be it in the public or private health care sectors, including those that are simply maintaining their registration status with the SANC.

The Department of Health yielded to the introduction of the Occupational Specific Dispensation (OSD) that was made effective on 30 June 2007. This was rolled out from the Department of Public Service Administration (DPSA) in all public health care institutions. The beneficiaries of the dispensation were the registered nurses who were in the Public Service on 30 June 2007. Those registered nurses who had a post registration or a post basic nursing course for specialisation, like orthopedic nursing, child nursing, advanced midwifery and neonatal nursing science, nursing education, nursing management, to mention only a few. These nurses had their salaries adjusted based on their experiences from the time that they qualified as professional nurses, the date on which the specialisation SANC diploma was acquired and, also their work experience in the area of their specific specialisation. The first phase of the OSD implementation moved nurses from the 2007 salary notches to the OSD notch. This was followed by the second phase, which took into consideration the nurses recognisable, relevant, and verifiable work experience in their area of speciality. Personal experiences and observations reveal that even the registered nurses categories were not all catered for. This does not solve the clinical and nursing management plight of staff retention, since registered nurses prefer to work in their specialised areas rather than be utilised in the more general clinical nursing areas. It did leave a dilemma of divisions among the registered nurse categories and clinical governance issues. The South African National Health Strategy has among its priorities the strengthening of the human resource capital and the reengineering of the primary health care services, so as to address some of the issues that contribute towards excessive job demands. Task shifting is also in a process of being rolled out so as to remove nurses from non-nursing duties, in the same district where the study was undertaken, food hostesses, ward clerks, messengers and all round hospital orderlies are being phased in so that nurses are able to work in

their specialised nursing care jobs and leave out the non-clinical tasks out of their workplace.

Jannati, Y., Mohammadi, R., Seyedfatem, N., (2011) describe coping as a process whereby an individual nurse makes a cognitive evaluation of the workplace circumstances and task performance, and the emotional responses to any given incident which is framed or named by the individual as facilitating or stress-provoking. For the former label of 'facilitating', the nurse achieves a state of mental equilibrium and the factors are not perceived as stress provoking. The task performance is executed without experiencing undue emotional pressure. For the latter, labeled as 'stress-provoking', the individual experiences a range of overwhelming emotions that induce a state of mental disequilibrium. In the context of the present study, this coping is relevant for the responses of the individual nurse who is affected, infected or afflicted with HIV/AIDS related illnesses, and for those who are experiencing the shortfall due to the reduction in attendance numbers by those who are unwell, and the excessive workload that accompanies the absenteeism or morbidity of their colleagues (Jannati, et al., 2011). Another element, which impacts on how the individual copes with the perceived excessive workplace demands, is neuroticism (Cieslak, Knoll, & Luszczynska, 2007). This is an emotional response of exaggerated fearfulness that makes the individual frame circumstances negatively, with increased perception of workplace stress. The category of nurses who are said to be neurotic, will, apart from perceived stress, view their supervisors as non-facilitative and rate them as "low" in rendering support.

Jantjies (2009) mentions the notion of Employee Assistance Programmes (EAP) as a way of mitigating some of the factors that overwhelm registered nurses as an add on towards the excessive job demands, for the categories of health care workers and professionals that fall under their supervision. This programme places emphasis on the total and integrative care of an employee from the physical, mental, psychological and social aspects of health. The EAP program facilitates capacity building, which affords an individual

employee with multiple skills that are transferrable in varying workplace situations for job satisfaction, empowerment and improved interpersonal relationships.

Wu, Zhu, Wang, & Lan (2007), in a study carried out in China, state that nurses make up the category of health care professionals in the health care delivery system who bring about stability in the healthcare workforce. The placement of nurses in the health care sector becomes an important factor towards the actualisation of quality health care. They are with the clients on a continuous basis during their shift, as opposed to other health care professionals like doctors, social workers, physiotherapists who serve the patients in a consultancy capacity. According to Wu, et al. (2007), lower educational status was associated with burnout and emotional exhaustion. Other factors that are cited include work overload, excessive responsibility, role insufficiency, and role boundaries. Role boundaries, in the light of the present study, can be seen as the absence or lack of decision-making latitude, the restriction of which may culminate in perceived workplace stress.

Hawkins (1997) states that nursing is a demanding and stressful profession but maintains that nurse training prepares nurses to meet such demands. This assertion is in contrast with the findings presented by Munro, Rodwell and Harding (1998) where inadequate student nurse (learner) preparation was cited as a factor in perceived stress. Again, in a study carried out by Kipping, (2000), where qualified and unqualified nurses were study participants, one of the perceived sources of stress cited was inadequate preparation for and during transition from student nurses' roles to the role functions of a qualified or registered nurse. Gray-Toft, and Anderson (1981) states that new graduates who are placed in professional nurses' ranks perceive the work circumstances as epitomised by an excessive workload and that the support they received from their colleagues and supervisors was questionable. The transitional period from the position of student nurse to that of a qualified professional nurse presents overwhelming challenges which are

more intense when these new graduates are placed in a rural nursing setting (Gray-Toft and Anderson 1981).

Nurses who are placed in rural or remote nursing areas find it difficult to access career development due to the nurse shortages and recruitment challenges that supervisor's experience (Weymouth, Davey, Wright, Nieuwoudt, Barclay, Belton, Svenson, Bowell, 2007). The workplace environment is believed to be non-facilitating, and they occasionally experience feelings of inadequacy. Being controlled remotely by supervisors is perceived as a lack of supervisory support (Weymouth, et al., 2007). In most cases they lack the multiple skills necessary for adapting and coping, which experienced nurses, possess (Gray-Toft and Anderson (1981). This view is supported by Nadolski, Bell, Brewer, Frankel, Cushing & Brokaw (2006). Training for medical doctors and nurses is isolating and they lack collaborative teaching, yet, when they are qualified, both nurses and doctors are expected to function in a multi-disciplinary team setting for integrative holistic patient care (Nadolski, Bell, Brewer, Frankel, Cushing, & Brokaw 2006). Exposure to the multi-disciplinary team during the induction period is perceived as an excessive job demand (Nadolski, et al., 2006).

Munro, Rodwell and Harding (1998) examined the effects of workplace stressors on employee wellbeing. In this instance, the study participants were psychiatric or mental health nurses. The element of social support was added to the job demand control model. The findings revealed that the ability to have control over ones job had a significant effect on job satisfaction. Nurses who believed that they exercised control and authority over decision-making processes, and enjoyed the support of the supervisors, believed that the task performance pressures were alleviated, and that they enjoyed a healthier mental state according to Munro, Rodwell and Harding (1998). Shen, et al. (2007) used the Job Content Questionnaire developed by Karasek & Theorel (1990) to examine job demands and job control, including decision-making latitude and social support.

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A study carried out by Golubic, Milosevic, Knezevic, & Mustajbegovic (2009) revealed that there are six major types of workplace stressors. These are cited as follows: work organisation and remuneration or financial issues; feedback from the consumers of health care or the public; non-conducive workplace environment and workplace hazards; inter-personal conflicts in the workplace; shift work; professional and intellectual demands. Shift work is cited as one of the factors in workplace stress perception, according to Golubic, et al. (2009). This is supported by Gamble, Motsinger-Reif, Borsetti, Servick, Ciarleglio, Robbins, Hicks, Carver, Hamilton, Wells, Summar, McMahon, & Johnson (2011). Nurses who work the night shift are prone to difficulties in adapting to the work environment due to interference with sleep patterns that bring about discord in their body's functioning, as opposed to better adaptation shown by nurses who are placed on a day shift. The body discord influences the adaptation, coping and cognitive appraisal of workplace circumstances to become perceived as stress-laden (Gamble, et al. 2011).

Workplace policy and work schedules influence the perception of workplace factors as stress-laden owing to night shifts and having to work over weekends (Sehlen et al. 2009).

Karasek and Theorell (1990) cited shift work as posing a psychological strain in the absence of facilitating and mediating interaction from colleagues and superiors. This view is supported by Sehlen et al. (2009) who state that this does not only affect nurses; as even medical doctors who are placed on night shift are subjected to this state of bodily discord due to disturbed and irregular sleeping patterns. The focus needs to be directed towards the total health of employees (Durow, 1987). This means that employees must be viewed as an integrative unit, not in fragments, for task performance, and attempts to facilitate and mediate are believed to be capable of reducing or manipulating

stress levels or perceptions of workplace stress. This is in support of the inclusion of social support, which is cited by Munro, Rodwell and Harding (1998) as having a mediating or moderating effect on the perception of sources of workplace stress.

Munro, Rodwell and Harding (1998) examined the effect of social support in the workplace, and concluded that it exerted a protective effect in so far as work-related stress was concerned. Karasek and Theorell (1990) state that a supervisor, who shows concern and pays attention to the employee as a person and creates teamwork opportunities, coupled with co-workers who are helpful and competent, alleviate or moderate workplace stress. Kaplan, Boshof and Kellerman, (1991) in a study where the variables of interest, namely job involvement, quality of life and job satisfaction constituted the focal point, stated that nurse practitioners who identify with their work and become over-involved are often unable to detach themselves from the emotional turmoil of their patients. In the presence of a facilitative supervisor and supportive colleagues, and a leader who demonstrates confidence in the employee through active participation and supervision, and the presence of on-going feedback mechanisms, the stress sources and response become moderated (Karasek and Theorell, 1990).

Based on this background, this study attempted to explore the perceptions of work-related stress as described by nurses working in specific nursing or health care units. Particular focus will be on the identification of modifiable risk factors associated with work-related stress and interventions to ameliorate risk.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Early work and more recent contributions over the study continuum including Munro, Rodwell and Hardin (1998) and Jannati, et al. (2011) are in agreement in acknowledging the exceptionally high levels of stress that nurses experience in their high stress environments. Some studies that have tested the job demand, job control or job strain model developed by Karasek & Theorell (1990) and have concluded that a loss of control and freedom to exercise decision-making is associated with increased job stress. Shen, et al. (2007) used the Job Content Questionnaire developed by Karasek & Theorell (1990) to examine job demands and job control including decision-making latitude and social support among nurses who were placed in psychiatric institutions in Taiwan and confirmed that adverse workplace circumstances pose a threat to the employees' wellbeing and general state of health. They concluded that the profession of nursing presented different stresses in different contexts and this view supports the need for a more specific study of the factors associated with work related stress in the South African context.

The development of work-related stress has been attributed, by some including Pendukeni (2004); as resulting from the nursing specialism practiced, for example, nurses who work in short stay units and areas where high rates of death are dealt with reported the highest rates of work related stress. In South Africa, research on work-related stress among nurses has mainly utilised job satisfaction, job dissatisfaction and job over-involvement as variables of interest (Naudé & Rothmann, 2006). As suggested by the varied explanations for causal pathways related to work related stress and/or compassion fatigue, there is a need for a more culturally attuned understanding of causal factors associated with workplace stress among nurses.

1.4 RESEARCH PURPOSE

The purpose of the study was to describe:

Nurses' perceptions of the impact of workplace stress and the differing ways in which the stress impacted performance, job satisfaction and well being in selected public Hospitals in Umgungundlovu Health District in KwaZulu-Natal.

The relationship between job demands, job control, social support and perceived levels of stress among nurses who are placed in selected care areas with a particular emphasis on the role played by cultural variables.

An identification of the range of modifiable risk factors associated with work related stress among nurses.

1.5 RESEARCH OBJECTIVES

The objectives of the study were:

1. To quantify the prevalence/rates of work-related stress and compassion fatigue among nurses working in selected public Hospitals in Umgungundlovu Health District in KwaZulu-Natal.
2. To determine the range of causal precipitants of work-related stress among nurses working in selected care units in selected public hospitals.
3. To determine the role that cultural variations play in nurses perceptions of work-related stress with regard to job demands, job and support.
4. To explore the relationship between perceived job demands, job control, support and the perceived levels of stress of nurses working in selected care units.

5. To explore the range of nurse' perceived interventions / actions that can be utilised to reduce the prevalence of compassion fatigue / work related stress among nurses.

1.6 RESEARCH QUESTIONS

1. What are the ranges of factors that contribute to the development of work-related stress among nurses working in selected care units in public hospitals?

2. What is the range of impacts that perceived workplace stress has on job performance and job satisfaction among participant nurses?

3. What is the role played by nurses' cultural background in their perception of compassion fatigue or work related stress?

4. What are the range of actions / interventions that nurses can take to minimise the impact of work-related stress on job performance and satisfaction?

1.7 RESEARCH HYPOTHESIS

Hilborn (1997) defines a hypothesis as a proposed explanation of a phenomenon, which still has to be rigorously tested. Hypotheses can be expressed as positive, negative or null hypotheses. Within the current study, a positive hypothesis was assumed i.e. that there is a relationship between two measured phenomena, which in this case was that the rates of perceived work-related stress among nurses were related to the care unit(s), which the nurse(s) worked in. The basis of this hypothetical position were based on predecessor studies within the field which suggest that nurses who

experience increased job demands and low job control will evidence high levels of perceived stress, compared to nurses who experience high job demands and high job control (Cieslak, Knoll, & Luczczynska 2007).

1.8 SIGNIFICANCE OF THE STUDY

It was hoped that the study would yield findings that would contribute meaningful insights that will prove useful to nursing practice, nursing management, nursing education, and future research, for improved employee wellbeing and productivity. If achieved satisfactorily, these discoveries can lead to positive patient outcomes. The study offers important baseline information on perceived sources of workplace stress as described by the nurses in these health care facilities and most importantly, their viewpoints about possible sources of support to minimise the existence of work related stress. With its primary focus on nursing and most specifically psychiatric nursing, the current study has the potential to provide guidance on psychological interventions that may be suitable as workplace interventions to reduce compassion fatigue and other work-related indicators of stress.

1.9 DEFINITION OF TERMS

As with many studies of specialist areas, there are terms and phrases that must be clarified to facilitate meaningful discourse about the topic of interest. Informed by this, the following terms are defined with reference to the literature and most specifically with respect to how each will be operationalised within the study.

1.9.1 Workplace stress

In this study perceived workplace stress refers to the individual nurse's excessive job demands as expressed by the individual nurses. Indicators of perceived workplace stress, according to Patrician, Shang and Lake (2010) include deterioration and non-compliance with health protective behaviour with increased susceptibility to ailments and infection; unexplained prolonged absences; tobacco and alcohol consumption; lack of job satisfaction; poor task performance standards, poor interpersonal relationships among colleagues and supervisors (Patrician, et al, 2010). Nurses are overwhelmed by workplace circumstances and, in the absence of job control, they are unable to handle and cope with the mismatch hence workplace stress perceptions surface (Hawkins, 1997).

1.9.2 Job demands

This is the sum total of the task performance and workplace circumstances which are imposed on the individual nurse who is not equipped to mitigate them owing to the limitations in the task performance environment (Dubreuil, Morin, Courcy, & Loiselle, Laughrea, 2009). In this study job demands refer to the workplace factors that are perceived by the individual nurse to be unmanageable in the absence of a visible supervisor and collegial support (Jannati, Mohammadi & Seyedfatem 2011).

1.9.3 Job control

This refers to the ability and freedom of the individual employee to exert an influence on the conditions related to task performance (Dubreuil, Morin, Courcy, & Loiselle, Laughrea, 2009). The individual nurse is enabled to shape and influence task performance circumstances within parameters of clinical nursing practice standards. In this study, job control refers to the ability of the individual nurse to mitigate and manipulate factors around task performance without becoming overwhelmed.

This includes decision-making and problem solving, which are part of task performance, as well as influencing workplace policies and work schedules, which affect nurses (Nelson, Brunetto, Farr-Wharton & Currant 2007). This promotes new learning and productivity and job satisfaction. Job satisfaction, in view of the present study, is a modifying factor of perceived workplace stress (Pendukeni, 2004).

1.9.4 Decision-making latitude

This is the ability and freedom that the individual employee exercises in influencing conditions of task performance (Nelson, et al., 2007). It is an element that is included in the job control aspect. In this study decision making latitude refers to the freedom that the individual nurse enjoys in influencing factors in the performance environment.

1.9.5 Social Support

This refers to the availability of the facilitating and enabling factors and individuals and or supervisors in the task performance environment. It is the perception by the individual employee that colleagues and/or supervisors are enabling, helpful and facilitating towards task performance (Coomber & Barribal, 2007). The individual nurse makes an appraisal of the workplace circumstances, colleagues and supervisors and the extent to which they are facilitating or overwhelming and intimidating. When the workplace human resources and material resources are perceived to be facilitating, with flexible and accessible colleagues and supervisors, excessive job demands are moderated and the individual copes without perceived workplace stress (Jannati, et al. 2011). This provides an individual with the mental, psychological and emotional aspects of health in order to maintain a state of equilibrium (Nelson, et al. 2007).

1.9.6 Job Satisfaction

Job satisfaction is a subjective feeling which is influenced by, or preceded by a set of preconditions which (according to the individual nurse) sum up as an accommodating and facilitating environment for nursing task performance; and which the nurse experiences as sustained passion and internal reward for and, as a result of task performance (Coomber, et al. 2007). In this study, job satisfaction refers to the internal satisfaction or reward that the individual nurse experiences as a way of feedback for the job well done. The nurse demonstrates or expresses indicators that he/she is content, satisfied and energised to take on his/her tasks (Coomber, et al. 2007). Absence of job satisfaction makes the nurse lose interest in his/her grooming, become emotionally worn-out, ill treat his/her patients and colleagues that may result

in patient care, caring standards and patient outcomes being compromised Kivimaki, Sutinet, Elovainion, Vahtera, Rasanen, Toyry, Ferrie, Firth-Cozen, Landbergis, Schnall, Dietz, & Pickering (2001); Kamchuchat, et al. (2008) and Patrician, et al. (2010).

1.9.7 Selected care units

These are the nursing units that the sample was drawn from in the five public hospitals in Umgungundlovu health district, KwaZulu-Natal and include: general critical care, neonatal unit, paediatric units, step-down units, burn units, acute psychiatric units, forensic psychiatric units, and operating theatre medical in-patient and outpatient units.

1.9.8 Nurse

Within the South African Nursing context and as operationalised here, this refers to the qualified nurse who is registered and licensed to practice as a professional nurse in terms of the Nursing Act, No 33 of 2005, SANC (2005). In this study, registered or professional nurses were used as participants.

1.10 CONCLUSION

This chapter discussed the introduction and background to the study, presented the statement of the research problem, the research purpose, and the significance of the study, the research objectives, research questions, research hypothesis and the definitions of terms.

Chapter Two deals with the literature review; Chapter Three with the methodology; Chapter Four deals with presentation of findings and their interpretation. Lastly the final chapter, i.e. Chapter Five, presents the discussion of the findings, the conclusions and the recommendations emanating from the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter Two deals with the search for, and review of literature relevant to the research topic. Researchers rarely conduct research in an intellectual vacuum; their studies are usually undertaken within the context of an existing knowledge base and researchers almost always do a literature review to familiarise themselves with that knowledge base. There are a range of activities associated with conducting a literature search and preparing a written review, including locating and critiquing studies and drawing conclusions about existing evidence. A written research review should provide readers with a well-organised summary of the current state of knowledge on a topic. The review should point out both consistencies and contradictions in the literature and offer possible explanations for inconsistencies (Polit & Beck 2008).

2.2 PURPOSE OF THE LITERATURE REVIEW

The typical purpose for analysing or reviewing existing literature is to generate research questions to identify what is known and not known about a topic, to identify concepts of the theoretical traditions within the bodies of literature, and to describe methods of enquiry used in earlier work including their success and short comings.

2.3 DATA SEARCH STRATEGY: - DATABASE FOR THE INFORMATION

The databases used to search for literature for this study were obtained from Cinahl, Medline, Pubmed, Ebsco Host as well as by means of Google Scholar search engines. The key words used were ‘perceived workplace stress’,

‘stress’, ‘nurses’, ‘job demands’, ‘job control’ and ‘support’. The literature review consists of both national (RSA) and international studies.

2.4 PRE-REVIEW CONSIDERATIONS

The concept of the workplace has been discussed in varied ways within literary sources and it felt important to offer an in-depth definitional overview in advance of the review proper. This is presented in the initial aspect of the literature review as offered below.

2.4.1 Definition of workplace stress and related workplace factors

Nurses play a major role in rendering patient care in health care institutions. It is believed that nurses execute their clinical nursing tasks in an environment that is conducive to perceived workplace stress in an almost daily occupational routine. The International Council of Nurses’ (ICN, 2006) fact sheet states that the circumstances under which nurses perform their nursing routine functions are laden with stress (ICN, 2006). These circumstances include an enclosed atmosphere, time pressures, excessive noise or undue quietness, sudden swings from intense to mundane tasks, denial of second chances for transgressions, unpleasant sights and sounds and standing for long hours.

Perception of workplace stress is a result of a combination of factors, as described in the job demand or strain and job control model explained by Karasek and Theorell (1990). Job demands include job expectations, challenges that the job or the nature of the task presents, performance conditions and deadlines, and the nature of the work environment where task performance occurs. Handling these demands will be mediated by the significant level of authority and decision-making latitude the employee

exercises in the performance of tasks, and the degree to which the employee exercises this latitude to influence the environment with particular reference to perceptions of work-related stress (Karasek & Theorell, 1990).

Job demand has qualitative and quantitative aspects, that is, mental pressures and strain that accompanies job demands, and the physical pressures that accompany performance expectations (Karasek and Theorell, 1990). Qualitative elements include nursing task performance and action deadlines, challenges, expectations, personal and interpersonal conflicts, task pressures and job insecurity. Quantitative aspects include physical job demands, physical exertion required for task performance, physical and environmental hazards, safety measures, and unsafe or risky work methods. A work environment that is safe, with controlled hazardous exposure is believed to provide facilitative employee task performance and productivity and to promote mental health (Karasek and Theorell, 1990). A threatening work environment poses excessive challenges to employees and interaction with job demands and low job control leads to increased levels of perceived stress (Karasek and Theorell, 1990).

Edmunds (2010) states that, perceptions of the workplace and the stress associated with it differ when employees perceive that their task performance circumstances present high or excessive demands. Nurses who find that they have to expend increased physical energy and work for longer hours, as is seen with shift work, experience their work circumstances as strenuous. The strain that results predisposes them to a range of chronic diseases, for example, cardiac diseases (Edmunds, 2010).

Shift work is associated with perceived low decision-making latitude and is considered a risk factor (Edmunds 2010). A study carried out among blue-collar shift workers revealed that job insecurity leads to deterioration in social networks and increased mental arousal and workplace stress. Adverse physical environmental conditions and shift work leads to adverse

psychological conditions and stress. There is a relationship between job strain and job satisfaction levels. The ability of the individual to exercise job control and exercise decision-making latitude promotes new learning and job satisfaction, reduces mental and physical strain and results in feelings of mastery and reduced levels of uncertainty and stress (Edmunds 2010).

2.4.2 Sources of workplace stress

The major sources of workplace stress cited are associated with the enormous and multiple demands, which are mostly imposed, by the nurses' supervisors and managers, the support personnel or administrative staff and medical colleagues. Nurses form part of the multi-disciplinary health care team that is comprised of non-nursing members as well (Pendukeni, 2004). These non-nursing team members are believed, just like the nurses' supervisors, to add to the psychological demands that nurses have to deal with. This view is supported by Patrician, Shang & Lake (2010) who confirm that, apart from the perceived major sources of workplace stress, the situation is further exacerbated by a lack of support from supervisors and colleagues (Patrician, et al., 2010). The situation creates role conflict and leads to work overload. The instrumental role of a nurse which includes physical care exerts goal-oriented demands in its own right, in the sense that nurses feel pressured to cure or assist their clients to get better (Jannat, Mohammadi & Seyedfatem, 2011). The expressive role of the nurse, where nurses relate to their clients on an emotional level in empathic understanding again seems to place undue pressure on the nurse. When duty calls for them to provide emotional support to the critically ill, or to the relatives of those who are terminally ill and those on the verge of death, including their relatives, next-of-kin and loved ones, nurses are pressurised, and this accounts for excessive job demands with perceived workplace stress and compassion fatigue.

According to Jannati, et al. (2011), the above situation calls for accessible coping mechanisms. Coping is explained as a process whereby the individual nurse pieces the task performance circumstances together and makes a mental or cognitive evaluation. This includes emotional and feeling aspects. When workplace circumstances are overwhelming in the absence of support, the nurse frames or names the situation as stress provoking (Kalliath & Morris, 2002).

2.4.3 Perception of job demands

Workplace stress is frequently associated with alterations in the employee's mental health status, depending on the level of psychological stimulation and arousal (Karasek and Theorell, 1990). The interaction between stress, job demands and job control is perceived by an employee who is exercising authority in decision-making, and has an ability to influence the environment (Karasek and Theorell, 1990). The employee will readily engage new options as the work situation demands them and active learning and mastery will occur, with high job or task performance satisfaction levels and reduction of perceived workplace stress (Karasek and Theorell, 1990). On the contrary, an employee who is restricted from exercising authority in decision-making will use ineffective processes, with limited learning and job satisfaction.

The perception of job demands is an individual or subjective phenomenon. An individual employee perceives the workplace circumstances as stress provoking, in relation to job performance and productivity. The manner in which the employee weighs the workplace contextual circumstances is more private and occurs at an individual level (Coomber & Barribal, 2007). Once again, it might suffice to backtrack as an individual employee, to revisit the nature, intensity and diversity of the performance environment. The individual employee performs a cognitive appraisal of the circumstances surrounding job performance. The individual's emotional climate and the immediate workplace environmental factors will exert an influence on the cognitive processing of the stimuli. If the presenting stimulus is weighed as stress provoking, and the

employee feels that he/she does not have control over the work circumstances, then the notion of job demands arises (Coomber & Barribal, 2007). On the contrary, an employee who is faced with overwhelming job performance stressors, but has the freedom to influence, manipulate or moderate the stressors in the form of decision-making, will find the workplace circumstances motivating, facilitating challenging and enabling (Ostry, Hersler, Kelly, Demers, Teschke, Hertzman & Page 2001).

Workplace factors, challenging as they may be, expose the individual employee to learning opportunities with the possibility of personal and workplace development and productivity. Active jobs have their strengths in so far as employee benefits are concerned. Active jobs are filled with challenges and a somewhat controlled or accommodating workplace environment (Karasek & Theorell, 1990). On the contrary, workplace circumstances that are high in job demand, but low in decision-making latitude, leave employees without opportunities for decision-making experiences, therefore the opportunities for personal and workplace development are limited. Reference is made to Selye's model of stress, which asserts that opportunities for learning and productivity, as in active jobs, give rise to positive stress (Ross & Altmaier, 1994). Passive jobs, according to this model, give rise to negative stress, which is stress with no opportunities for development and productivity (Ross & Altmaier, 1994).

2.4.4 Modifying factors

The notion of moderators of workplace stress perceptions is brought about as a contrasting factor in the perception of workplace stress. Factors in the performance environment that are perceived as having a moderating effect on the workplace stressors will vary from one employee to the other. The individual employee's emotional environment and the performance environment context will influence the cognitive appraisal, hence the individual

variations. The same performance environment stimulus or factor is likely to induce variable responses in different individual employees. Both the internal individual employee's emotional environment, and his/her cognitive processing will account for the final appraisal and the perception of stress-provoking factors in the performance environment, or facilitating factors in the performance environment which promote excellence and productivity (AbuAlRub, 2004). Application of the ergonomic principle in the workplace is believed to exert a modifying or moderating factor in perceived workplace stress (McFarlane, et al. 2004 in Jannati, et al. 2011).

2.4.5 Job control

Job control includes factors whereby individual employees indicate that they are able to have a say about how, when and why they carry out their work. This is more of a reality if there are systems in place that promote and facilitate feedback and responses to the concerns that the employees raise at any given time. Employees who have a say regarding the pace of their job performance, who are also encouraged to be creative in the utilisation of their skills, and who are afforded an opportunity to show initiative without negative criticism from their supervisors are said to enjoy job control. Such employees engage with a performance environment that encourages them to explore and undertake more challenging tasks with eagerness to excel in what they do, which amounts to excellence and workplace productivity (Karasek, and Theorell, 1990).

Ostry, et al. (2001) in their measurement of psychosocial job strain with the Job Content Questionnaire, using experienced job evaluators or experts, revealed that their findings showed that men and women who experienced low job control had increased risks of developing workplace stress compared to those who reported high job control.

2.4.6 Decision-making latitude

Karasek and Theorell (1990) indicate that job stress is moderated and transformed by decision-making latitude. Employees whose performance environment allows them to participate and have a say in workplace issues, move to self-efficacy (Salmond & Susan 2007). These employees enjoy a considerable level of job satisfaction. New challenges in the workplace are perceived as areas of new learning, with the individual employee expending his/her skill and potential to the fullest, thus stepping up productivity and moving towards excellence. Individual employees need to understand their roles in the workplace or organisation so as to avoid a conflict of roles. Each employee's role has a set of responsibilities, which have to be communicated in a clear and unambiguous manner (Salmond & Susan 2007).

2.4.6.1 Strategies that promote decision-making latitude

According to AlbuAlrub (2004) these strategies include the following: involvement of organised labour or trade unions in the structuring of workplace policies with the intention of empowering the employees and playing a mediating role between the employee and the supervisor, which would manipulate or decrease the perception of workplace stress among employees. This will also facilitate collective bargaining, and eliminate circumstances where employees perceive performance demands. Adequate job training is cited as one of the factors that make the employee perceive his/her work circumstances as less stress provoking owing to the levels of confidence. Furthermore, employees who are afforded an opportunity to influence performance conditions perceive their work circumstances as less stress provoking, and this motivates them to step up their productivity and excel in their task performance.

2.5 SUPPORT IN A WORKING ENVIRONMENT

While modifying factors can make a difference**,** they cannot be successful in manipulating perception of workplace stress on their own, in the absence of a supportive work environment. Another factor is the individual one, where an individual employee perceives immediate work circumstances in his/her own unique manner. This type of workplace support includes social, cognitive, emotional and collegial support.

2.5.1 Social support

Cieslak et al, (2007) state that social support influences the perception of workplace stress. Social support is cited as affecting the perception of workplace stress. High social support may reduce perceptions of workplace stress, as social support comprises the perception by the individual employee that the supervisor and his/her colleagues take an interest in him/her as a human and as a colleague.

Social support, in the present study, includes encouragement, anticipation and meeting performance needs by the supervisor, sponsorship of resources in the performance environment, availability and approachability of supervisors and line managers and colleagues. There are a variety of ways and means whereby the indicators of social support can be measured. The standard of social support may be stated as workplace circumstances that afford an employee adequate information and support from his/her colleagues and/or supervisors, as well as tangible systems put in place whereby employee concerns are responded to timeously. Statements, which may be included under the social support standard, may comprise any of the following: Social support includes a salient factor of workplace relationships. Supervisors, superiors and line managers have their distinct roles and

responsibilities that are informed and guided by the workplace code of conduct, or the professional code of conduct. This form of workplace relationship is significant to ensure harmony and productivity. This will eliminate untoward actions of bullying and other forms of unacceptable workplace behaviour. The codes of conduct and practice, as well as institutional protocols and prescripts will help orientate employees and superiors. The workplace has to promote desirable and positive behaviours to avoid conflict and time wasting. Employees need to be afforded the time and space as a platform to information sharing about their work circumstances, challenges and the progress made towards quality and productivity. The supervisors have to be consistent and cautious in order to identify and manage undesirable behaviour and acts or omissions and misconduct. The employees have to level with information systems so that they can engage in peer assistance, counseling, review and feedback, for quality, learning and productivity. Social support mechanisms in which the individual employee perceives a sense of being assisted or protected exert different effects, namely: Main effects, moderating effects and mediating effects. Main effects, according to Langford et al (1997), reflect a specific relationship between the end result of the employee's wellbeing and social support. Moderating effects will be in play when the employee perceives workplace stress-provoking circumstances as having been weakened by the presence of social support. Social support dilutes the nature, intensity and diversity of workplace stressors in the performance environment (Leiter & Harvie 1996; Maslach & Leiter, 1997). Workplace stressors can be minimised if colleagues and supervisors exert a buffering effect on the negative effects of stress-provoking circumstances that present with job demands. Social support from supervisors, superiors and colleagues exerts a positive influence on the wellbeing of the employee. This promotes a better level of coping by the individual employee. Colleagues and supervisors who are ready and willing to share information and practice close personal relationships in the workplace, enhance the employee's sense of wellbeing. This state is linked to the concept of empowerment according to Chapman, (1993) and Laschinger & Havens (1997). An employee who perceives the workplace environment as empowering enjoys an optimal state of mental health and productivity. Social

support includes the manner and extent to which the employee receives encouragement or sponsorship received superiors and supervisors. In circumstances where the employee makes an appraisal of the workplace circumstances as assisting or protecting, the employee perceives the performance environment as facilitating, thus the stress-provoking circumstances are moderated (Ostry et al, 2001).

2.5.2 Emotional support

Emotional support is built into social support (Chapman, 1993). Behavioural support is what is mostly offered by the next person or colleague in the form of assistance, or by way of co-sharing job responsibilities with another colleague or groups in the workplace. It is asserted that where colleagues share their job responsibilities and co-operate with each other, the load is evenly distributed among them and they perceive less stress. Where there is a lot of competition and individuality in task performance, there is a possibility of heightened perceptions of stress. Though the managers are looked upon as agents for social support by their supervisees, most of the social support comes from and among the co-workers (Chapman, 1993).

2.5.3 Collegial support

Co-worker or collegial support is looked at as a more significant origin for social support, and as such, will make employees perceive their work demands as manageable, and they will subsequently report less perceptions and experiences of role conflict or role ambiguity (Edmunds 2010). These are the type of employees who will score high for participative task performance, and who are able to augment each other when the need arises, and conserve a source of strength for one another. Such employees, when placed in a managerial position, will use a consultative method of human resource skill utilisation. There is a belief that colleagues surround the newly-appointed

employees, especially during induction and the intense orientation period, but once they are believed to have found their feet, they are deserted and left on their own, and collegial support is significantly withdrawn. This is particularly observable when mentorship is lacking. On the other hand, nurses who have a higher educational and professional qualification level will be subjected to limited collegial support, because of the high expectation levels from their managers, supervisors and colleagues Collegial and or supervisor support is cited as manipulating or decreasing the stress perceptions in the workplace (Auerbach et al, 2013).

2.6 CONCLUSION

This chapter presented an overview of literature related to the topic which indicates that very limited research has been conducted in the study area and studies done on perceptions of work related stress have presented varied findings from one profession to another and from one context to the next. The literature review of the terms provided the researcher with a substantial background in terms of acquisition of knowledge with regard to the study.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 THEORETICAL FRAMEWORK

In the context of a research study, Theoretical frameworks refer to the overall conceptual underpinnings of the study (Polit & Beck 2008). Furthermore, they serve to guide and generate ideas for the research and can be utilised as the foundation for new theories (Polit & Beck 2008). When applied inductively, a theoretical framework governs and guides decisions made during the research process and guide the development of the study's data collection tools. This study was based on the workplace stress model developed by Karasek and Theorell (1990). According to these authors, workplace or occupational stress is a dynamic state of arousal and mental stimulation triggered by the imbalance or mismatch between job demands, job expectations and circumstances under which the job is performed, and the ability of the individual to handle the situation.

The work-stress model by Karasek and Theorell (1990) represents a modification of earlier theoretical work by Karasek (1979). The original model, initially named the Job Demand-Control (JDC) Model, theorises about how psychosocial job characteristics relate to employee health. The occupational stress aspect of this model focuses on modifiable "stressors" at work e.g. high workload, work pace, role conflict, and role ambiguity and secondly, "job control' which relates to the level of discretion employees have on how to meet job demands. Low job control is seen as contributing to increased work-related strain.

The workplace stress model offers a theoretical perspective about the joint effect of job demands and decision latitude (Karasek & Theorell 1990). Within the proposed theory, the most serious health effects are expected in a high

demand – low control work situation. By contrast, the model postulates that (high) control can act as a buffer that minimises the potentially negative impact of high demands on employee's performance. Figure 3.1 presents a diagrammatic illustration of the workplace-stress model. The model suggests four possible combinations of high and low levels of demands and decision latitude within the work place in four distinct work situations: (1) high strain, (2) low strain, (3) active, and (4) passive jobs.

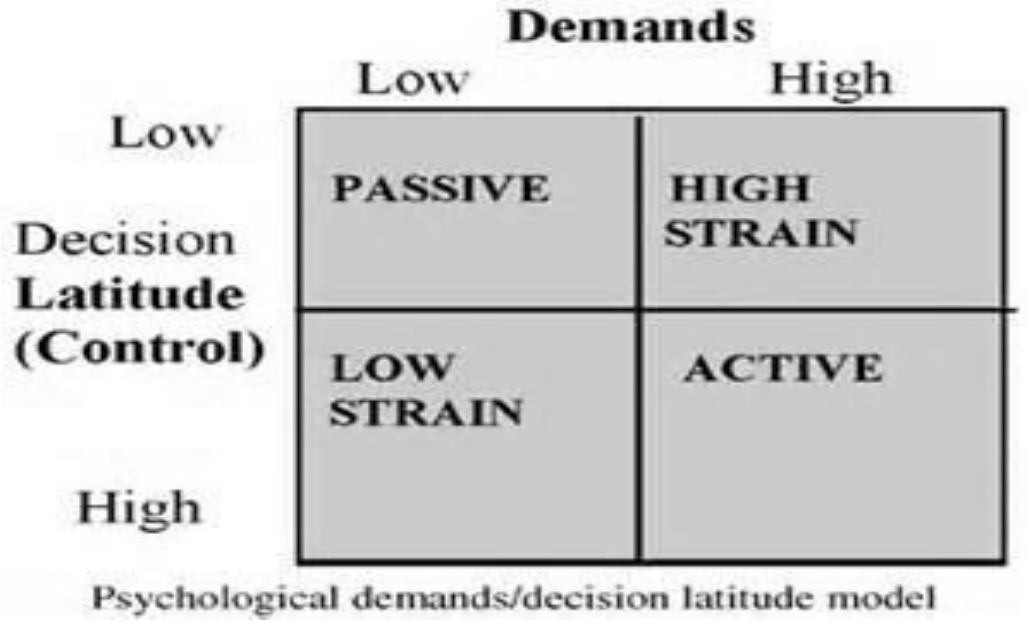

Figure 3.1. – The Workplace- Stress Model (Source: - Karasek & Theorell, 1990).

The diagrammatic representation above summarises the two key hypotheses that are central to understanding the development of an understanding of work related stress. The primary theoretical assumption asserts the view that a combination of high job demands and low decision latitude leads to job strain (such as exhaustion and compassion fatigue). High demands initiate a

state of arousal which, if simultaneously present with an environmental constraint (i.e., low decision latitude), the arousal cannot be converted into an effective coping response. Therefore, the stimulation is transformed into damaging, unused residual strain (Karasek & Theorell, 1990). The active learning theory argues that high job demands combined with high decision latitude result in an increase in work motivation, performance, learning, and personal growth. The experiences of nurses within nursing can be understood within the context and as such, Karasek & Theorell's (1990) model offers a basis for understanding the most noteworthy factors that are implicated in understanding work related stress.

3.2 ASSUMPTIONS ABOUT PERCEPTIONS OF WORKPLACE STRESS

Beyond the above-mentioned assumptions from Karasek and Theorell (1990), there are additional literary contributions related to the interplay between job demands, other work conditions and work related stress. To ensure a more comprehensive discussion of these factors, the work by Karasek & Theorell (1990) is expanded on by integrating content by other contributors to the discourse.

3.2.1 Job Demands

Hawkins (1997) states that nursing is a demanding and stressful profession. This assertion is supported by the Internal Labour Organisation which indicates that nurses confront patients' suffering, their grief, terminal illness, death and dying almost every day. The picture is challenging, overwhelming and frightening (Hingley, 1984). Karasek and Theorell (1990) confirm that the perception of workplace stress emerges as a result of a combination of factors. The factors that are referred to here include the presence of job and psychological demands in the absence of job control. Job control, according to Karasek and Theorell (1990) allows the individual employee to exercise decision-making latitude and have a say over or influence circumstances in the job performance environment.

Shen & Gallivan (2004) confirm that excessive and unrealistic expectations in a non-facilitative work environment yield negative results. Perceived workplace stress, lack of job satisfaction and manifestation of physical and psychological strain produce mental ill health (Bryant, Fairbrother & Fenton 2000). Cieslak, et al., (2007) state that individuals who are highly emotional can easily become overwhelmed by workplace factors. This heightened emotionalism blocks their coping and decision-making capabilities hence they perceive their work circumstances as stress provoking. Jannati, et al. (2011) confirms that nurses who do not access coping strategies when faced with workplace or task performance demands, find their work circumstances stress provoking.

Perceived workplace stress is a phenomenon, which occurs when the individual employee appraises his/her workplace environment as non-facilitating (Bryant, Fairbrother and Fenton, 2000). The individual employee perceives that the work environment is laden with job demands, with minimal or no support forthcoming from colleagues and supervisors. This picture is further complicated by the lack of job control, where the individual employee is not afforded an opportunity to participate in decision-making about job performance (Bryant, et al. 2000).

3.2.2 Job expectations

The supervisor has a set of expectations of individual employees. The employees are expected to perform their tasks in accordance with certain and specific performance standards. The supervisors are looking for excellence and quality performance (AbuAlRub 2004).

3.2.3 Circumstances under which employees perform

Jannati, et al (2011) states that nursing situations compel nurses to take patient care decisions seriously, which will influence the recovery path or possible death. If nurses lack knowledge and decision-making competence or coping skills, they may perceive their workplace circumstances as stress provoking. Munro, Rodwell and Harding (1998) cite inadequate student nurse preparation, as one of the factors affecting perceived workplace stress. This is in contrast with the assertion made by Hawkins (1997) that, while nursing is a demanding and stressful profession, nurses are prepared to meet those demands.

3.2.4 Modifying factors in perceived workplace stress

According to Karasek and Theorell (1990), job control and support modify the perception of workplace circumstances. Individual nurses who are afforded an opportunity to take decisions acquire autonomy and self-directedness in commanding their accessible coping strategies hence they perceive their workplace circumstances as non-stress-provoking (Shen & Gallivan, 2004).

3.2.5 Job Control

Job control includes decision-making latitude. It also includes factors whereby the individual employee has a say about the circumstances and reasons for job performance. Coupled with feedback from the supervisors, it becomes a reason for the employees to excel in their job performance (Karasek and Theorell, 1990 and Shen & Gallivan, 2004).

3.2.6 Decision-making latitude

Employees who participate in the decision-making processes around job performance, and who also receive prompt feedback from their supervisors are encouraged to be creative and their workplace job performance skills are strengthened (Kipping, 2000). They seem to be willing to take on challenges and enjoy control over their job performance. On the contrary, employees who are not consulted about job performance issues find the job performance environment intimidating, unfriendly and unaccommodating. This exerts pressure on the employees, which is perceived as job performance demands, or psychological job demands (Kipping, 2000). This view is supported by Shen & Gallivan (2004) who confirm that decision-making latitude mediates workplace task performance demands and yields job satisfaction. Decision-making is a job control element, which modifies or moderates job demands (Karasek & Theorell, 1990 and Shen & Gallivan, 2004).

3.3 SUPPORT IN A WORKING ENVIRONMENT

Support in the workplace includes relationships among colleagues and supervisors.

3.3.1 Social support

Shirey (2004) describes social support as a state whereby an individual nurse perceives and feels that colleagues and team members make an effort to reach out to him/her, so as to facilitate, guide, befriend, protect, mentor, reward, reinforce him/her in the task performance environment. According to Shirey (2004), social support includes a variety of characteristics such as: Social bonds and networks which allow for unlimited interaction and verbal exchanges within the workplace structure; which, in turn, induces harmony and a high level of connectedness among work colleagues as all members

strive to reach out and help one another. Social support bears the following attributes according to Shirey (2004): Emotional attachment and involvement to a certain extent; acts of capacitating and skill upgrading through interactive skill-mix interactions; information-sharing on coping tactics and work procedures; positive feedback mechanisms to foster confidence and mastery as individuals feel comfortable trying out new techniques in an environment that is accepting and friendly (Shirey, 2004).

According to Chapman (1993), support takes the form of material resources that support job performance, acceptable remuneration packages and incentives. The significant aspect of social support is what the individual perceives as the circumstances in the immediate performance environment (Chapman, 1993). Perceived social support mediates workplace demands and instills a positive feeling within an individual with the following consequential traits: Competence building; health-promoting implementation for self and patient outcomes; sharpened problem-solving skills; reduction of episodes of workplace anxiety and uncertainty; improved mental wellbeing; feelings of individual worth and purpose; general positive outlook on personal and work life.

Factors that are perceived as facilitating, encouraging and affirming in the workplace are included as social support in this study.

3.3.2 Emotional support

Shirey (2004) explains this aspect of social support as a state where nurses working, as teams perceive that they enjoy the emotional connection and involvement of the other nurses to a certain extent. Chapman (1993) states that behavioural support is what is mostly offered by the next person or colleague in the form of assistance, or by way of co-sharing job responsibilities with another colleague or groups in the workplace. It is asserted that where colleagues share their job responsibilities and co-operate with each other, the load is evenly distributed amongst them and they

perceive less stress. Where there is a lot of competition and individuality in task performance, there is a possibility of heightened perceptions of stress. Though the managers are looked upon as agents for emotional support by their supervisees, most of the emotional support comes from and among the co-workers (Chapman, 1993). Pendukeni (2004) states that poor interactional practices among colleagues and multi-disciplinary members bring about a state of emotional exhaustion and burnout.

3.3.3 Collegial support

Co-worker or collegial support is looked at as a more significant origin for social support, and as such, can make employees perceive their work demands as manageable so that they subsequently report less workplace perceptions. Collegial support is cited as manipulating or decreasing the stress perceptions in the workplace (Auerbach, David, Bauerhaus, Staiger & Douglas 2013). This view is supported by Pendukeni (2004) who adds that lack of knowledge; skills and expertise among the work team leave the limited experienced and competent members with excessive task performance demands. Nelson, Brunetto, Farr-Wharton & Currant (2007) cite the lack of workplace support structures as a contributory factor in perceived workplace stress. The support structures implied here include information-sharing patterns, workplace communication and reporting practices.

3.3.4 Supervisor's support

Employees, who sense that the employer or supervisor continuously engages them in a consultative and integrative manner, find it non-intimidating to approach the supervisor, and there is more co-operation as opposed to competition in the performance environment and less perception of workplace stress (Karasek and Theorell, 1990). A task performance environment, which is filled with rewards, recognition, expertise, personal and professional

development, human and material resources translates the given circumstances into social support (Pendukeni, 2004 and Jannati et al., 2011).

The graphic presentation of the theoretical framework follows in Fig 2.1:

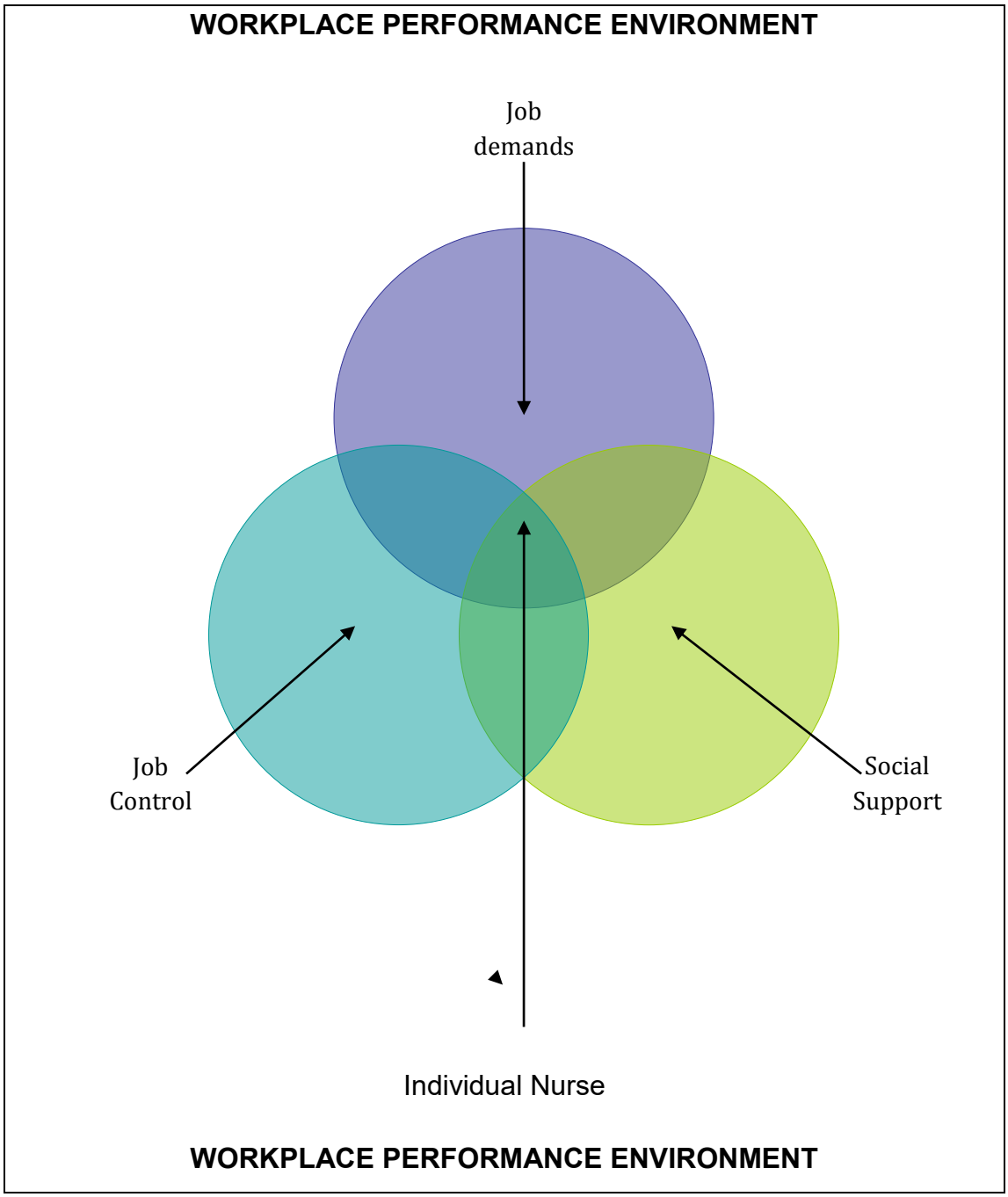

Fig 3.1 Theoretical Framework of Perceived Workplace Stress

3.4 APPLICATION TO THE THEORETICAL FRAMEWORK OF THE STUDY

The theoretical framework includes ergonomic principles, physical, psychological and job demands, cognitive appraisal, moderating factors, as well as individual perceptions of workplace stress and/or the ability to handle job demands.

3.4.1 Ergonomic principle

The person-environment fit principle (ergonomics) states that the employer identifies individual employee backgrounds and capabilities and makes an effort to match the environment and task performance expectations with and to the individual. The employee develops coping skills that facilitate adjustment, while the failure to do so leads to increased mental strain and stress. Therefore, instead of forcing the employee to fit into the environment and task demands, employee attributes and characteristics are used to design or redesign the job expectations. There is a notion of individual differences in the potential for adjustment, and coping; the perception and reactions of employees will not follow a prescribed or uniform pattern, but will depend on the cognitive appraisal, which the individual employee makes in his/her unique situation. The individual names or frames the situation and attaches a label to it as stress provoking or as promoting mental health. Hawkins (1997) describes the ergonomic principle as an interface between the employee's abilities, job requirements and the job environment, in such a way that these factors become tailored to match the employee's physical, psychological, and behavioural limitations. With reference to the ergonomic principle, stress manifests itself when there is a mismatch between the demands made on the employee, and the employee's ability to meet those demands.

3.4.2 Psychological and job demands

Karasek and Theorell (1990) propose that when the psychological demands of the job are high and the employee's control over the task performance is low, psychological strain results. On the other hand, when job demands are high and the employee is exercising authority in decision-making, employees engage in self-determination and this motivates them to new learning with less perceived stress levels and increased performance satisfaction. This approach is believed to promote individual employee growth and productivity. AbuAlRub, R. F., (2004), expanded the job strain model to include social support, especially that of superiors and co-workers. Social support is believed to moderate the impact of workplace stress. Workplace stress is not an inevitable phenomenon, that is, a certain amount of arousal and mental stimulation will facilitate job performance, but, in excess, over-stimulation is counterproductive. The arousal that is triggered by the job demands and the extent of job control can lead to psychological imbalance, and subsequent mental stress and strain. This state exerts undue strain on the individual employee, hence stress and the perception of workplace stress surface.

3.4.3 Individual ability to handle job demands

The ergonomic principle manipulates and moderates the mismatch between the workplace performance tasks, the environment where the tasks are performed, and the individual human physical, psychological, and behavioural limitations (Hawkins, 1997). Shen & Gallivan (2004) and Shirey (2004) state that coping is facilitated by social support and job control, which includes decision-making latitude. To illustrate this model, a nurse whose reading glasses have been snatched by the patient in a paediatric fluid rehydration unit, will not be assigned to put up scalp vein infusion lines until the reading glasses issue has been resolved. In the meantime, it will be essential to keep the nurse productively occupied, and s/he can be assigned to oral rehydration tasks. This should be done through negotiation with the nurse in question.

The process of negotiation in this illustration reveals the involvement of a nurse in decision-making, which affords him/her an opportunity of job control in the presence of supervisory support.

3.5 CONCLUSION

This chapter dealt with the concepts of workplace stress and related factors, sources of workplace stress, perceptions of workplace stress and modifying factors in workplace stress which includes job control, decision-making latitude and support in the work environment. The theoretical underpinning of the study was explained in terms of the interactional or transactional model, the social ecology model and the study of stress in organisations theory, over and above the work place stress model and the perceived stress scale. The theoretical framework was also discussed, including the assumptions about the perceptions of workplace stress. The following chapter deals with the research methodology.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter deals with research methodology: research design; sample and sampling procedure; instruments for data collection and data collection process; validity and reliability; ethical considerations and data analysis

4.2 RESEARCH PARADIGM

A non-experimental descriptive correlation design was used to guide the research process. This design was seen as suited to the questions raised in this study, as the researcher did not aim to study casual relationships related to the workplace, while at the same time sought to do more than merely describe what is, but rather to describe the relationship between decision latitude, job demand, social support and levels of perceived stress for nurses working in selected care units. According to Polit and Hungler (1997) a descriptive correlational design is well suited in cases where the aim of the study is not to infer causal relationships but mainly to describe relationships among variables.

4.2.1 Research Approach

This study adopted a quantitative approach, which deals with the investigation of phenomena that lends themselves to precise or accurate measurement and quantification often involving a rigorous and controlled design. This approach

also deals with the measurement of amounts and quantities of phenomena. In social sciences, it refers to the systematic empirical investigation of quantitative properties and phenomena and their relationships. Quantitative research aims to describe events (Polit and Beck, 2003).

4.2.2 Research Design

The research design adopted in this study is descriptive and aims to describe data and characteristics about the population or phenomena being studied. It answers the questions of who, what, where, when and how. Descriptive research cannot be used to describe what caused a situation. It cannot be used to create causal relationships where one variable affects another. Descriptive research is sometimes said to have a low internal validity, here research data is factual, accurate and systematic. Descriptive research refers to the type of research question, design and data analysis. Descriptive statistics reduces data into a manageable form. It describes the events, organises, tabulates, depicts and describes data collection. It provides visual aids such as charts to aid the reader in understanding data distribution (Polit and Beck, 2008).

The main aim and objective of descriptive research is to portray the characteristics of persons, situations or groups and or the frequency with which certain phenomena occur. For example, descriptive research is used in studies of correlation and frequencies.

4.3 SETTING

Public hospitals in the Umgungundlovu Health District, KwaZulu-Natal were used as the study setting. Nurses in the selected care units were represented

the source population for purposively appropriate participants. Nurse participants who were selected for inclusion in the study were on duty, but not actively engaged with patient care at the time of their participation. Each special care unit provided a quiet room away from patient care but within the unit for participants to complete the questionnaire. One public hospital was covered per day during the data collection process.

4.4 TARGET POPULATION

The target population for this study were the nurses working in the selected care units in KwaZulu-Natal (KZN), in the Umgungundlovu Health District, namely: General Critical Care, Neonatal unit, Paediatric units, Burns unit, Intermediate psychiatric units, Forensic psychiatric units, Operating theatre, Obstetrics and Gynaecology, Outpatient, Medical and Surgical units. The sampling frame was developed from the number of nurses and professional nurses in the institutions, which participated in the study. The accessible population, however, were nurses working in public hospitals in KZN, in the Umgungundlovu Health District.

4.5 STUDY SAMPLING AND SAMPLING PROCEDURE

The targeted sample size for this present study was one hundred and eighty-seven (187) was based on an epi-info calculation that was generated by a statistician who had indicated 1 need for 135 participants. The decision to increase this was a precautionary measure to allow for low questionnaire returns. The sample was drawn from the accessible population. Jannati, et al. (2011) states that a sample selection can be based on the willingness of the participants. A simple random sample of nurses working in selected care units, namely: outpatients, general, critical care, burns, psychiatric, forensic

renal, and dialysis was selected. The sample size was one hundred and eighty-seven (187) these participants were selected from five public hospitals in the Umgungundlovu Health District, KwaZulu-Natal.

4.6 SELECTION CRITERIA FOR PARTICIPANTS

The participants had to be working in the selected care units. The participants took part on a voluntary basis. Participants were selected on the basis of their availability. They had to be above the age of eighteen years. They were drawn from the selected care units in public hospitals in the Umgungundlovu health district, KwaZulu-Natal. The study had anticipated attracting a minimum of thirty participants in each of the five health care institutions. On three study sites this target was not reached and these numbers were added on in the other two study sites. Table 3.1 represents the selection of study participants below.

Table 4.1: Selection of study participants

Institution	Total Professional Nurses	Participants	Anticipated Target
A	100	25	30
B	100	25	30
C	125	26	30
D	200	50	30
E	325	61	30

4.7 DATA COLLECTION PROCESS

The researcher with the respective hospital and nursing managers secured appointments in the five participating public hospitals, in the KZN, Umgungundlovu health district. Their hospital managers informed Nurse Managers in selected care units. Different days were used for the researcher to visit the five public hospitals. Each hospital was covered in one day.

Individual questionnaires were hand-delivered to the study participants. Each participant was provided with a return envelope to be used for ensuring privacy and confidentiality of information. The researcher collected the completed questionnaires in a sealed envelope using a collection box, which was only handled by the researcher to ensure a high return of responses.

4.7.1 Data collection instruments

The instruments used for data collection were the Job Content Questionnaire (JCQ) (Appendix C) and the Perceived Stress Scale (PSS) (Appendix C). The JCQ instrument was adapted from Karasek and Theorell (1990). The original instrument was obtained from the developer, Professor Robert Karasek, and written informed consent was granted to have it modified and adapted to the present study. The PSS instrument was based on an initially developed instrument by Cohen, Karmack, & Mermelstein (1983). Permission need not be obtained from the developers of the Perceived Stress Scale if the instrument is used for academic purposes and not for profit purposes (Appendix D).

Two self-administered questionnaires were used to collect data. First, an abridged JCQ designed by Karasek and Theorell (1990) was used to collect data on job demand, job control and social support. The complete JCQ

consisted of forty-nine (49) items. The fourteen (14) items that were excluded in the present study examine aspects related to physical job demands, which the researcher felt to be outside the focus of the present study. Furthermore, the rationale for excluding these items was that they were not really relevant to the present study, the major focus of which was the nursing work environment in South Africa. Nursing workforce staff shortages nullify the job insecurity variable; whereas physical work demands, as defined within the JCQ, bear very minimal, if any, significance to the nurses' work. The abridged version of the JCQ is a thirty-three (33) item, four point Likert Scale questionnaire. The 33 items were divided into three sections, (a) decision latitude - (12) items, (b) psychological demands - (9) items, and (c) supervisor and co-worker support - (12) items.

The Perceived Stress Scale designed by Cohen, Karmarck and Mermelstein (1983) was used to measure perceived levels of stress. The measurement is founded on the understanding that stress is a subjective phenomenon, and although objective measures of stress exist, they often fail to take into account the non-specificity of most antecedents of stress in an individual's life. Cohen, Karmarck and Mermelstein (1983) developed a global measure of stress; the Perceived Stress Scale (PSS). Although the PSS, as conceptualised by Cohen, Karmarck and Mermelstein (1983), placed emphasis on non-specific and global life experiences, for the purpose of this study, the scale was modified to focus on work life experiences. Thus it was a measure of the individual appraisal of the work life experiences and circumstances either as stressful or non-stress-provoking. The Perceived Stress Scale did not focus on the objective unfolding of workplace events, but rather on the individual or subjective appraisal as a determinant of the individual response or coping means. Thus PSS measurement scores to the individual cognitive evaluation of the workplace circumstances. The model focused on the minimum time frame of about a calendar month, and it was believed that this was able to focus direction on some of the workplace factors that were currently influencing the individual perception of stress-provoking factors.

The modified PSS describes individual responses to workplace events based on the subjective cognitive evaluation to determine the vulnerability or mental health risk factors in the employee's behaviour or coping means that are accessed by the individual, and the effect of the moderating and or mediating circumstances, for example, social support. The PSS was not a clinical measure of psychiatric morbidity, but only assessed the level of mental health risk as confirmed by the employee's cognitive subjective evaluation of workplace events and environmental circumstances.

4.7.2 Content of questionnaire

The questionnaire consisted of five sections labelled A, B, C, D and E as discussed below.

Section A consisted of biographical data that was included because this can have an impact on how nurses perceive stress. This section consisted of 8 (eight) questions.

Section B consisted of decision-making latitude because this has an impact on the level of stress on nurses. This section consisted of 12 (twelve) questions.

Section C consisted of psychological demands, which may also have an effect on the level of stress of nurses. This section consisted of 9 (nine) questions.

Section D consisted of social support. This section consisted of 12 (twelve) questions.

Section E consisted of the perceived stress scale. This section consisted of 14 (fourteen) questions.

4.8 MEASURES FOR ENSURING RELIABILITY AND VALIDITY OF THE INSTRUMENT

4.8.1 Instrument validity.

Instrument validity seeks to ascertain whether the instrument accurately measures what it is supposed to measure, (Brink, 2007: 159). Both instruments were modified; however, the content of the JCQ was not altered except for the exclusion of the physical demands section of the JCQ questionnaire according to Cohen et al., (1983).

4.8.2 Reliability

The developers by means of test retest measures using two samples of college students and a smoking cessation group determined reliability of the PSS. Coefficient alpha reliability scored for the three groups ranged between .84 and .86. The authors reported correspondence scores of .65 between Life Events Scale and PSS (Cohen, Kamarck & Mermelstein, 1983).

The JCQ was also subjected to a number of psychometric tests. Karasek and Theorell (1990) report that analysis of internal consistency (of the demand-control support measures) showed that the Cronbach alpha coefficients are high when mixed working populations are studied, but are considerably lower when homogenous groups are studied, as is the case in health care settings. The authors attribute the lower correlations in studies involving homogenous groups to the fact that, to a great extent, decision latitude is determined by the content of the work in the occupation, whereas demands and social support reflect to a greater extent local work site conditions and individual perceptions (Karasek and Theorell, 1990). Nevertheless, Cronbach's alpha coefficients for the JCQ scales generally ranged between .73 and .74 for women and men respectively (Karasek, Brisson, Kawakami, Houtman, Bongers, Amick, 1998). Measures of validity for the JCQ were used mainly for tests of correspondence between the JCQ subscales. The instrument was also

approved by seasoned academics that have had long experience of supervising postgraduate students; one of these academics has psychiatric training.

For the current study, the modified version of the PSS and the abridged version of the JCQ were administered twice to a group of ten nurses working in selected care units in one of the hospitals in Umgungundlovu Health District in order to ascertain the scales' measure of consistency. The test developers have stated that a two-day interval between tests is acceptable for the PSS; the researcher believed that that would be too short an interval, and therefore a week's interval was used for the test and retest.

4.8.3 Construct validity

Construct validity was measured by subjecting the questionnaire to expert validation to determine whether the two questionnaires measured what they purport to measure; job control, job demand, social support and perceived levels of workplace stress. Furthermore, a review of literature on theoretical models of workplace stress was undertaken to examine whether the concepts of language used in the two instruments shared any meaning with what was determined to be the current state of knowledge in the field of study.

4.8.4 Content validity

The variables of interest were explored using the questions indicated in Table 3.1 below. The section on the questionnaire is indicated, as well as the numbers of the questions that were asked to answer the research objectives.

Table 4.2 Content Validity-Research objectives, Sections and questions

Research Objectives	Variable	Section and Question Numbers
Perceived levels of stress	Psychological Demands	Section B. Questions 9-20
	Perception of Stress	Section E. Questions 1-14
Relationship	Psychological Demands	Section C. Questions 21 - 29
	Perception of stress	Section E. Questions 1 - 14
	Decision-making latitude	Section B. Question 9 - 20
	Social Support	Section D. Question 30 - 44

4.9 DATA ANALYSIS

Cross-tabulation of the frequencies of perceived sources of work-related stress was done and a Chi-Square test was carried out to measure levels of statistical significance and association between the psychological job demands, decision latitude (skill discretion and decision authority) and social support (supervisor and colleague support). Pearson's test was conducted to describe the level of association or relationship and the direction between the nurse category, psychological demands (job demands), decision authority

(skill discretion and decision authority) and social (supervisor and co-worker) support and perceived work-related stress.

4.10 DATA MANAGEMENT

Data was safeguarded after collection. Only the researcher and the research supervisor were able to access the data. The hard copy material was kept under lock and key while electronic versions were stored in a password-controlled personal computer. The data will be kept with the supervisor at the School of Nursing for five years following completion of the study.

4.11 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. *Collins English Dictionary* (20131:233) defines ethics as "a social, religious, or civil code of behaviour considered correct, especially that of a particular group, profession, or individual". Research ethics involves protecting the rights of respondents and institutions in which research is done, and maintaining scientific integrity (Babbie & Mouton 2001:531; Burns & Grove 2007:181). A researcher is responsible for conducting research in an ethical manner. Failure to do so undermines the scientific process and might have negative consequences (Brink et al 2007:30). The researcher must address a range of ethical issues especially when a study involves humans as study participants. A statement of clearance was obtained from the Ethics Committee of the academic institution, University of KwaZulu-Natal (Appendix D). In observance of ethical concerns of the study, the following aspects were considered:

4.11.1 Permission for the study

Permission was obtained from the Superintendent-General (SG) of the KZN Department of Health to undertake the study (Appendix A). Further

permission was secured from the five participating institutions and departments (Appendix A).

4.11.2 Right to refuse or withdraw

Participants were told that they have the full right to refuse participation in the research (they can choose not to respond to some or all questions). It was further explained to the participants that if they do not wish to participate in the study they could withdraw.

4.11.3 The right to protection from discomfort and harm

The risk/benefit ratio was explained to respondents as the study has the potential to improve the health and wellbeing of nurses with minimal risk. Minimal risk is defined as a risk anticipated being no greater than those ordinarily encountered in daily life (Polit & Beck 2008:175).

4.11.4 The right to self-determination

The principle of self-determination means that prospective participants have the right to decide voluntarily whether to participate in a study, without risking any penalty or prejudicial treatment (Polit & Beck 2008:172). In this research, respondents (Female college students) were treated as ‘autonomous agents’ and the following steps were taken. The respondents were:

- Informed of the study’s objectives
- Requested to participation in the study
- Informed of their rights and that they were allowed to withdraw from the study without fear of any penalty

- Not coerced or deceived to participate. Their participation was totally voluntary

4.11.5 Self-determination

Participants were informed of their right and freedom to opt out of the study without the risk of penalty or prejudicial treatment. This meant that participants had the right to refuse to participate or to give information. At any stage of the study, the participants had a right to ask for clarity, or to terminate their participation if they so wished. After the participants were informed of the whole study process and their rights in participating in the study, an information sheet (Appendix D) was handed over to them. Informed consent was then obtained from all participants (Appendix D). The participants were promised that they would be informed of the outcome of the study on completion.

4.11.6 Potential risks and benefits

According to the principle of beneficence, a study must not subject the participants to harm. Harm can be of a physical, social or psychological nature. Respecting the decisions of the participants was one way of reducing the risks to the participants. An effort was made by the researcher to ensure that the study did not absorb their personal or break time, but it was conducted during official hours of duty. The operational nurse managers ensured that nursing tasks that were required to be carried out during the time of participation in the study were covered, and were not allowed to accumulate for the participants to deal with later. The researcher in no way intended to maximise harm and minimise benefits. The researcher did not make any promises regarding rewards or incentives for participating in the study.

4.11.7 Confidentiality

Confidentiality of participants was assured by telling the participants that their responses would not be divulged to anyone. Only the rank, title, gender, age, population group, nursing unit names, and identification codes were used to identify participants.

4.11.8 Anonymity

The participants were assured that their names or personal particulars would not be used and that only professional titles would be applied. Data collected could not be linked to individual participants other than by the codes used.

4.12 CONCLUSION

The methodology of the study was presented in this chapter to direct the content of subsequent chapters and to discuss issues of reliability and validity. The main ethical issues around this study were considered and applied to the study. In the following chapter, data analysis is presented.

CHAPTER FIVE

PRESENTATION OF RESULTS

5.1 INTRODUCTION

This chapter presents the analysis and the interpretation of data. Descriptive statistics were initially done and this included the frequency in perceptions of stress, job demand, job control and support were measured. Demographic data was presented using frequency distributions, percentages and graphs where necessary. To reiterate, two instruments were used for data collection. The findings from these instruments were presented concurrently. The initial part focuses on demographic data; the second part focuses on the perceptions of participants about workplace stress among nurses in selected care units. A Chi-Square Test was used to measure the level of statistical significance for the nominal variables of stress frequency and correlation coefficient.

5.2 DEMOGRAPHIC DATA

This section includes the age of the participants, their gender, population group, marital status, job title and duration in the current job title, duration in the professional nurse ranks, and the selected care units they are currently working in.

5.2.1 Age group of participants

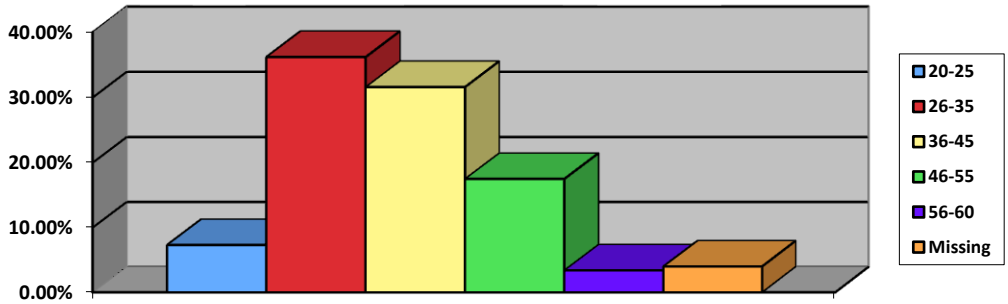

Fig. 5.1 Age of participants

The study revealed that more than a third of the total number of participants, [36.2% (n=64)], were between the ages of 26 and 35 years, while participants between 36 and 45 years of age comprised 31.6 % (n=56) and those between 46 and 55 years of age numbered 17.5% (n=31). Participants who were aged between 20 and 25 years, who were of the younger group numbered 7.3% (n=13). The more mature group fell within the range of 56 and 60 years of age at 3.4% (n=6). The participants who did not indicate their age comprised 4.0% (n=7. See Table 4.1 below.

5.2.2 Gender of participants

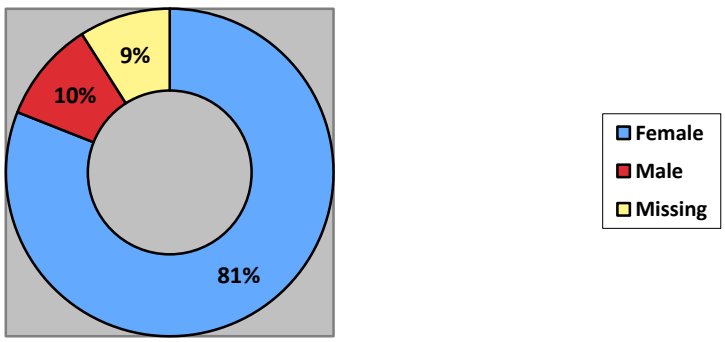

Fig. 5.2 Gender of participants

Table 4.2 above reveals that the majority of the participants, 81.9% (n=145) were female, 9.6 % (n=17) were male, and 8.5% (n=15) of the participants did not indicate their gender.

5.2.3 Population group

Almost sixty percent (n=106) of the participants were African, 27.1% (n= 48) of the participants were Indian, 8.5 % (n=15) were White and 4.5% (n=8) were Coloured. See Table 4.3 below.

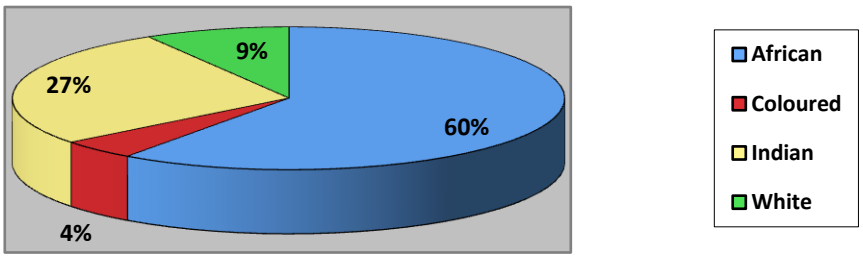

Fig. 5.3 Population group of participants

5.2.4 Marital status

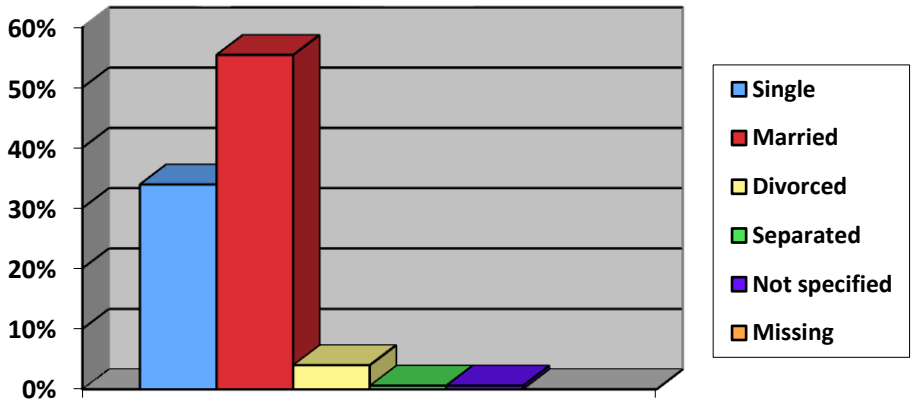

Fig. 5.4 Marital status of participants

Table 5.4 above shows initial findings and confirms that fifty-five percent (n=98) of the study population were married, 33.9% (n=60) were single, 4.0% (n= 7) were divorced, 5.1 % (n=9) were widowed, .6% (n=1) were separated. [(0.6%) (n=1)] of the patrticipants did not indicate their marital status.

5.2.5 Job title

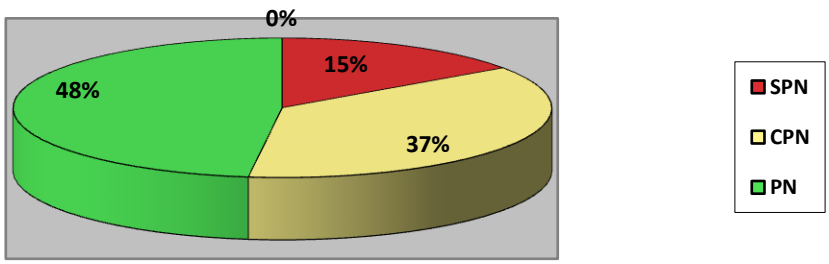

Fig. 5.5 Job title

Participants included professional nurses, senior professional nurses and chief professional nurses. The study revealed that 48% (n=85) of the participants were professional nurses, 36.7 %(n=65) were chief professional nurses and 15.3%(n=27) were senior professional nurses.

5.2.6 Duration in current employment position within their jobs

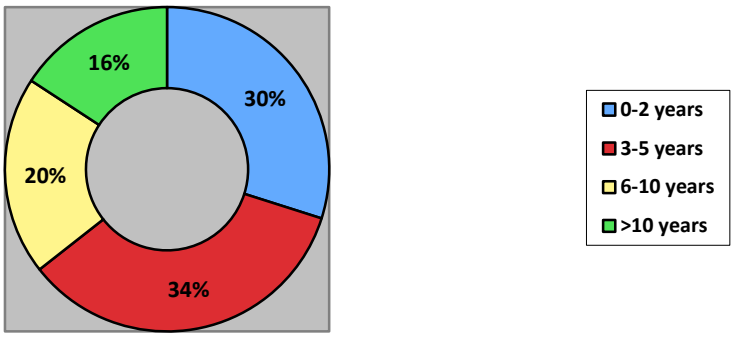

Fig. 5.6 Duration in present job within the organisation.

As indicated in Fig 5.6, Almost thirty –five percent of the participants (n=61) had experience of three to five years in their present position within the workplace, 29.9 %(n=53) had less than 2 years experience, 19.8% (n=35) had spent between six to ten years in their present positions, and 15.8% (n=28) had been in their present positions for more than ten years. This was an important finding in the analysis of the impact one's length of tenure in a position had on perceived rates of work related stress.

5.2.7 Duration in the professional nurses' ranks

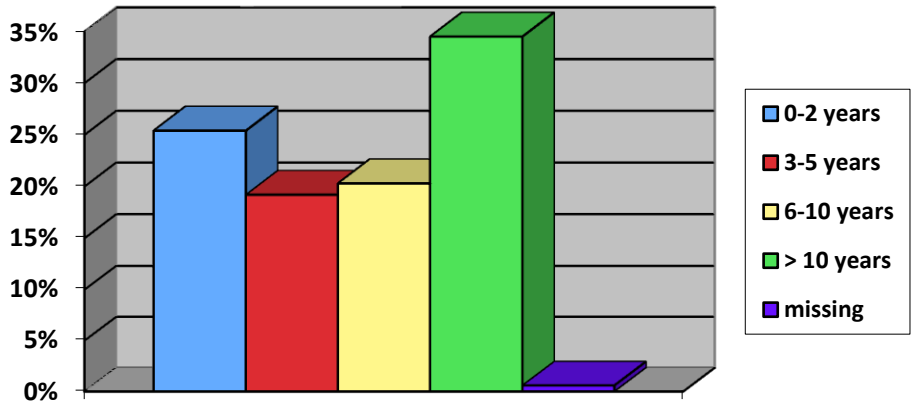

Fig. 5.7 Duration in professional nurse's rank

As confirmed in Fig 5.7 above, more than a third, thirty-four percent [34.5% (n=61)] of the participants had been practising as professional nurses for more than ten years. For the rest of the participants, the scores were as follows: 20.3% (n=36) had been professional nurses for more than six years, but less than ten years. Twenty-five percent (n=45) of the participants had been professional nurses for less than two years. A lower percentage, 19.2% (n=34) of the participants had been professional nurses for more than three years but for less than five years. Less than one percent of participants [0.6% (n=1)] did not indicate the number of years spent in the ranks of a professional nurse.

5.2.8 Selected care units currently Employed in

Table 5.1 Selected care units currently working in (N=177)

	Frequency	Percent
General Critical Care	11	6.2
Neonatal	7	4.0
Step-down unit	5	2.8
Pediatric	24	13.6
Burns	2	1.1
Acute psychiatric	15	8.5
Intermediate psychiatric	19	10.7
Forensic unit	18	10.2
Other	76	42.9
Total	177	100.0

Table 5.1 above showed that a greater percentage of the participants, 42.9 % (n= 76) were in units which included the obstetric unit, ante-natal care units, orthopaedic, medical and surgical care units. The other results were distributed as follows: 13.6% in the paediatric unit (n=24); the intermediate psychiatric unit had 10.7% (n=19) and the forensic psychiatric unit comprised 10.2 % (n=18), while the acute psychiatric unit had 8.5% (n=15); the neonatal units accommodated 4.0% (n=7); the general critical care units had three percent [6.2% n=(11)]; the step-down unit consisted of two percent [2.8% (n=5)] and the burns unit had 1.1% (n=2). .

5.3 DESCRIPTIVE STATISTICS

The independent variables in this study are job demand, job control, which includes decision-making latitude and support.

5.3.1 Decision-making latitude

According to Karasek and Theorell (1990), this is the perception by an individual employee that he or she is able to influence circumstances in the workplace and performance environment. Having a say, or participating in the decision-making processes or participating in teamwork is an indication of job control.

5.3.1.1 Feeling that the job requires the learning of new things

The study revealed that 50.3% (n=89) of the participants strongly agreed that they were required to learn new things in their jobs; 41.8% (n=74) agreed that their jobs required them to learn new things, whereas only four percent (n=7) responded that they were not required to learn new things as part of their jobs. The findings revealed that 1.7% (n=3) strongly disagreed. Table 5.2 below presents a graphical summation of the data on perceptions about the need to learn new jobs by study participants.

Table 5.2: Feeling that job requires the learning of new skills (N=177)

		Frequency	Percent
Valid	Strongly disagree	3	1.7
	Disagree	7	4.0
	Agree	74	41.8
	Strongly agree	89	50.3
	Total	173	97.7
Missing	System	4	2.3
Total		177	100.0

5.3.1.2 Feeling that the job requires repetitive work

The study revealed that a greater proportion of the participants, which accounted for 58.2% (n=103), and 28.8% (n=51) strongly agreed that their work involved repetitive work. The remaining 1.1% (n=2) of the participants strongly disagreed, stating that their job did not involve repetitive work, while 9.6% (n=17) disagreed that their job required a lot of repetitive work. Table 5.3 below presents a graphical overview of the data on perceived rates of repetition among participants' jobs.

Table 5.3: Feeling that the job requires a lot of repetitive work (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	17	9.6
	Agree	103	58.2
	Strongly agree	51	28.8
	Total	173	97.7
Missing		4	2.3
Total		177	100.0

5.3.1.3 Feeling that the job requires creativity

The study revealed that most participants, 54.8 % (n=97) agreed that their jobs required them to be creative. The participants who stated that their jobs did not require them to be creative, thus disagreeing, made up 9.0 % (n= 16). Thirty-three percent of the participants (n=59) strongly agreed, while 1.1 % of the participants strongly disagreed that their job requires creativity. Table 5.4 below presents the data 'creativity requirements' as perceived by study participants.

Table 5.4: Feeling that the job requires creativity (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	16	9.0
	Agree	97	54.8
	Strongly agree	59	33.3
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.1.4 Feeling that the job requires a lot of decision-making

The study revealed that 45.8 % (n=81) of the professional nurses agreed, whereas 29.4% (n=52) strongly agreed that their performance environment required them to make a lot of decisions on their own. Nineteen percent (n=34) of the participants disagreed, while 4.5% (n=8) of the participants strongly disagreed. See Table 5.5 below for a detailed overview.

Table 5.5 Feeling that the job requires a lot of decision-making (N=177)

		Frequency	Percent
	Strongly disagree	8	4.5
	Disagree	34	19.2
	Agree	81	45.8
	Strongly agree	52	29.4
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.1.5 Feeling that the job requires a high level of skill

The study revealed that most of the professional nurses who participated in the study confirmed that their job required a high level of skill; 63.8 % (n=113) strongly agreed, 29.9% (n=53) agreed. A small proportion, about four percent, (n=7) disagreed, stating that their job did not require a high level of skill. Table 5.6 presents the data below.

Table 5.6: Feeling that the job requires a high level of skill (N=177)

		Frequency	Percent
	Disagree	7	4.0
	Agree	53	29.9
	Strongly agree	113	63.8
	Total	173	97.7
Missing		4	2.3
Total		177	100.0

5.3.1.6 Little freedom to decide how to do their work

The study revealed that a high proportion of the participants, 48.0% (n=85), disagreed and 7.9 (n=14) strongly disagreed that they had very little freedom to decide how they did their work. Only thirty-three percent (n=58) of the participants agreed, while 9.6% (n=17) strongly agreed that they had little freedom to decide how they did their work. Table 5.6 presents the data below.

Table 5.6: **Little freedom to decide how to do their work (N=177)**

		Frequency	Percent
	Strongly disagree	14	7.9
	Disagree	85	48.0
	Agree	58	32.8
	Strongly agree	17	9.6
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.1.7 Getting to do a variety of things on their jobs

The study revealed that a larger proportion of the sample, 58.8% (n=104) of the participants agreed, and 23.2% (n=41) strongly agreed that they did a variety of things as part of their job. However, 14.7 % (n=26) of the participants disagreed, and 1.7 (n=3) strongly disagreed that they got to do a variety of things as part of their job. Table 5.7 below presents the data.

Table 5.7: Getting to do a variety of things on their jobs (N=177)

		Frequency	Percent
	Strongly disagree	3	1.7
	Disagree	26	14.7
	Agree	104	58.8
	Strongly agree	41	23.2
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.1.8 Having a lot to say about what happens in their jobs

The study showed that 50.8% (n=90) of the participants agreed and 24.9% (n=44) strongly agreed that they had a lot of say about what happened in their jobs. Of the remaining participants, 20.3% (n=36) of the participants disagreed and 2.8% (n=5) strongly disagreed that they did not have a lot of say about what happened in their jobs. Table 5.8 below presents the data.

Table 5.8: Having a lot to say about what happens in their jobs (N=177)

		Frequency	Percent
	Strongly disagree	5	2.8
	Disagree	36	20.3
	Agree	90	50.8
	Strongly agree	44	24.9
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.1.9 Availability of opportunities to develop their own special abilities

The study revealed that 52.5% (n=93) of the participants agreed, while 22 (n=39) strongly agreed that they had opportunities to develop their own special abilities. Twenty percent (n=36) of the participants disagreed, while 2.8% (n=5) strongly disagreed that they had opportunities to develop their own special abilities. Table 5.9 below presents the data.

Table 5.9: Availability of opportunities to develop their own special abilities (N=177)

		Frequency	Percent
	Strongly disagree	5	2.8
	Disagree	36	20.3
	Agree	93	52.5
	Strongly agree	39	22.0
	Total	173	97.7
Missing		4	2.3
Total		177	100.0

5.3.1.10 Having a significant influence on decisions

The study revealed that 56.5% (n=100) of the participants agreed, while 16.9% (n=30) strongly agreed that they had a significant influence on decisions in their work group or unit. Twenty-four percent (n=43) of the participants disagreed, while only 1.1% (n=2) strongly disagreed that they had a significant influence on decisions in their work group or unit. See Table 5.10 below for tabulated summary of above-quoted findings.

Table 5.10: Having significant influence over decisions in their work group or unit N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	43	24.3
	Agree	100	56.5
	Strongly agree	30	16.9
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.1.11 Work group makes decisions democratically

The study showed that 58.2 % (n=103) of the participants agreed and 13.6% (n=24) strongly agreed that their work group made decisions democratically. Twenty-three percent (n=40) of the participants disagreed, and 4.5% (n=8) of the participants strongly disagreed with the statement that their work group made decisions democratically. Table 5.11 below presents the data.

Table 5.11 Work group makes decisions democratically (N=177)

		Frequency	Percent
	Strongly disagree	8	4.5
	Disagree	40	22.6
	Agree	103	58.2
	Strongly agree	24	13.6
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.1.12 Supervising other people as part of their jobs

Most of the professional nurses, 54.8% (n=97), who participated in the study agreed, and 40.1% (n=71) strongly agreed that they supervised other people as part of their jobs. A low percentage [2.3% (n=4)] of the participants disagreed, and only 1.1% (n=2) of the participants strongly disagreed that they supervised other people as part of their jobs. See Table 5.12 below.

Table 5.12: Supervising other people as part of their jobs (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	4	2.3
	Agree	97	54.8
	Strongly agree	71	40.1
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.2. Section C: Psychological demands

5.3.2.1 Jobs require working fast

The results showed that 44.6% (n=79) of the participants agreed, while 44.1% (n=78) strongly agreed that their jobs required them to work fast. A small percentage of the participants, 9.6% (n=17) disagreed and 1.1% (n=2) strongly disagreed that their jobs required them to work fast. See Table 5.13 below.

Table 5.13: Jobs require working fast (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	17	9.6
	Agree	79	44.6
	Strongly agree	78	44.1
	Total	176	99.4
Missing		1	0.6
Total		177	100.0

5.3.2.2 Jobs require working very hard

The study revealed that 55.4% (n=98) of the participants strongly agreed, and 37.9% (n=67) agreed that their jobs required them to work very hard. A small percentage of the participants, 6.2% (n=11) disagreed that their jobs required them to work very hard. Table 5.22 presents the data below.

Table 5.22: Jobs require working very hard (N=177)

		Frequency	Percent
	Disagree	11	6.2
	Agree	67	37.9
	Strongly agree	98	55.4
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.2.3 Not being asked to do an excessive amount of work

The study showed that 40.7% (n=72) of the participants disagreed, while 23.7% (n=42) strongly disagreed that they were asked to do an excessive amount of work. Almost twenty-eight percent (n=49) of the participants agreed, while 6.8% (n=12) strongly agreed that they were not required to do an excessive amount of work. Table 5.14 presents the data below.

Table 5.14: Not being asked to do an excessive amount of work (N=177)

		Frequency	Percent
	Strongly disagree	42	23.7
	Disagree	72	40.7
	Agree	49	27.7
	Strongly agree	12	6.8
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.2.4 Having enough time to get the job done

The study showed that 40.7% (n=72) of the participants disagreed, and 14.1% (n=25) of the participants strongly disagreed that they had enough time to get the job done. Forty percent (n=71) of the participants agreed and 3.4% (n=6) strongly agreed that they had enough time to get the job done, thus the 'agrees' achieve almost the same percentage as the contrary. Table 5.15 presents the data below.

Table 5.15: Having enough time to get the job done (N=177)

		Frequency	Percent
	Strongly disagree	25	14.1
	Disagree	72	40.7
	Agree	71	40.1
	Strongly agree	6	3.4
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.2.5 Freedom from conflicting demands that others make

The study showed that 50.3% (n=89) of the participants disagreed and 16.4% (n=29) strongly disagreed that they had freedom from conflicting demands that others made. Twenty-seven percent [26.6% (n=47)] of the participants agreed, while 3.4% (n=6) strongly agreed that they were free from conflicting demands that others made. Table 5.16 presents the data below.

Table 5.16: Freedom from conflicting demands that others make (N=177)

		Frequency	Percent
	Strongly disagree	29	16.4
	Disagree	89	50.3
	Agree	47	26.6
	Strongly agree	6	3.4
	Total	171	96.6
Missing		6	3.4
Total		177	100.0

5.3.2.6 Jobs require long periods of concentration on the task

The study revealed that fifty-eight percent [58.2% (n=103)] of the participants agreed, whereas 24.3% (n=43) strongly agreed that their jobs required long periods of concentration on their tasks. Only 14.7% (n=26) of the participants disagreed and 1.7% (n=3) strongly disagreed that their jobs required long periods of concentration. Table 5.17 presents the data below.

Table 5.17: Jobs require long periods of concentration on the task (N=177)

		Frequency	Percent
Valid	Strongly disagree	3	1.7
	Disagree	26	14.7
	Agree	103	58.2
	Strongly agree	43	24.3
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.2.7 Tasks often interrupted before they can be completed requiring attention at a later time

The study revealed that 44.1% (n=78) of the participants agreed and 27.1% (n=48) strongly agreed that their tasks were often interrupted before they could be completed, thus requiring attention at a later time. Twenty-five percent [24.9% (n =44)] of the participants disagreed, and 2.8% (n=5) strongly disagreed that their tasks were often interrupted before they could be completed. Table 5.18 presents the data below.

Table 5.18: Tasks often interrupted before they can be completed requiring attention at a later time (N=177)

		Frequency	Percent
	Strongly disagree	5	2.8
	Disagree	44	24.9
	Agree	78	44.1
	Strongly agree	48	27.1
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.2.8 Feeling that their jobs were hectic

The study showed that thirty-six percent [36.2% (n=64)] of the participants agreed, while 34.5% (n=61) of the participants strongly agreed that their jobs were hectic. Twenty-three percent [23.2% (n=41)] disagreed and 2.3% (n=4) of the participants strongly disagreed that their jobs were hectic. Table 5.19 presents the data below.

Table 5.19: Feeling that their jobs were hectic (N=177)

		Frequency	Percent
	Strongly disagree	4	2.3
	Disagree	41	23.2
	Agree	64	36.2
	Strongly agree	61	34.5
	Total	170	96.0
Missing		7	4.0
Total		177	100.0

5.3.2.9 Waiting on work from other people or other departments often slowed them down on their jobs

The study showed that 44.6% (n=79) of the participants agreed, while 23.2% (n=41) of the participants strongly agreed that waiting for work from other people or other departments often slowed them down, delaying their jobs. Twenty-two percent [22.0% (n=39)] of the participants disagreed, and 2.8% (n=5) strongly disagreed that they felt that waiting for work from other people or departments often slowed their work down, delaying their jobs. Table 5.20 presents the data below.

Table 5.20: Waiting on work from other people or other departments often slowed them down on their jobs (N=177)

		Frequency	Percent
	Strongly disagree	5	2.8
	Disagree	39	22.0
	Agree	79	44.6
	Strongly agree	41	23.2
	Total	164	92.7
Missing		13	7.3
Total		177	100.0

5.3.3 Section D: Support

5.3.3.1 Supervisors concerned about the welfare of those under them

The study revealed that 65.0% (n=115) of the participants agreed and 9.6% (n=17) strongly agreed that supervisors were concerned about the welfare of others. A lower percentage, 15.8% (n=28) of the participants, disagreed that supervisors were concerned about the welfare of others. Table 5.21 presents the data below.

Table 5.21 Supervisors concerned about the welfare of those under them (N=177)

		Frequency	Percent
	Strongly disagree	15	8.5
	Disagree	28	15.8
	Agree	115	65.0
	Strongly agree	17	9.6
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.3.2 Supervisors helpful in getting the job done

The study showed that 65.0% (n=115) of the participants agreed and two percent [2.8% (n=5)] strongly agreed that the supervisors helped to get the job done. Only 16.9% (n=30) of the participants disagreed, and 2.8% (n=5) strongly disagreed that the supervisors helped to get the job done. Table 5.22 presents the data below.

Table 5.22: Supervisors helpful in getting the job done (N=177)

		Frequency	Percent
	Strongly disagree	5	2.8
	Disagree	30	16.9
	Agree	115	65.0
	Strongly agree	25	14.1
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.3.3 Exposure to hostility and conflict from their supervisors

The study showed that 55.9% (n=99) of the participants disagreed and seventeen percent [17.5% (n=31)] strongly disagreed that they were exposed to hostility or conflict from their supervisors. Nineteen percent [19.2 % (n=34)] of the participants agreed and 5.6% (n=10) strongly agreed that they were exposed to hostility from their supervisors. Table 5.23 presents the data below.

Table 5.23: Exposure to hostility and conflict from their supervisors (N=177)

		Frequency	Percent
	Strongly disagree	31	17.5
	Disagree	99	55.9
	Agree	34	19.2
	Strongly agree	10	5.6
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.3.4 Supervisors successful in getting people to work together

The study revealed that 61.0% (n=108) of the participants agreed and 15.8% (n=28) strongly agreed that their supervisors were successful in getting people to work together. The remaining 18.6% (n=33) of the participants disagreed, and 15.8% (n=28) strongly disagreed that their supervisors were successful in getting people to work together. Table 5.24 presents the data below.

Table 5.24: Supervisors successful in getting people to work together (N=177)

		Frequency	Percent
	Strongly disagree	6	3.4
	Disagree	33	18.6
	Agree	108	61.0
	Strongly agree	28	15.8
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.3.5 People they work with are competent in doing their own jobs

The study showed that fifty percent [59.3% (n=105)] of the participants agreed and 13.6% (n=24) strongly agreed that the people they worked with were competent to do their jobs. The remaining twenty-two percent of the participants (n=39) disagreed, and four percent [4.5% (n=8)] strongly disagreed that the people they worked with were competent to do their jobs. Table 5.25 presents the data below.

Table 5.25: People they work with are competent in doing their own jobs (N=177)

		Frequency	Percent
	Strongly disagree	8	4.5
	Disagree	39	22.0
	Agree	105	59.3
	Strongly agree	24	13.6
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.3.6 Working with people who take a personal interest in them

The study revealed that 53.1% (n=94) participants agreed, and 7.3% (n=13) strongly agreed that the people they worked with took a personal interest in them. The remaining thirty-three (32.8) percent of the participants (n=58) disagreed, and four percent strongly disagreed that the people they worked with took a personal interest in them. Table 5.26 presents the data below.

Table 5.26: Working with people who take a personal interest (N=177)

		Frequency	Percent
	Strongly disagree	7	4.0
	Disagree	58	32.8
	Agree	94	53.1
	Strongly agree	13	7.3
	Total	172	97.2
Missing		5	2.8
Total		177	100.0

5.3.3.7 Exposure to hostility and conflict from people they work with

The study revealed that 52.5% (n=93) of the participants disagreed, and twelve percent (12.4%) strongly disagreed that they were exposed to hostility from people they worked with. Twenty-nine percent [29.9% (n=53)] of the participants agreed, and four percent (4.0%) strongly agreed (n=7) that they were exposed to hostility and conflict from people they worked with. Table 5.27 presents the data below.

Table 5.27: Exposure to hostility and conflict from people they work with (N=177)

		Frequency	Percent
	Strongly disagree	22	12.4
	Disagree	93	52.5
	Agree	53	29.9
	Strongly agree	7	4.0
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.3.8 People they work with were friendly

The study showed that 70.1% (n=124) of the participants agreed, and nineteen percent (19.2%) of the participants (n=34) strongly agreed that the people they worked with were friendly. The remaining 8.5% (n =15) of the participants disagreed, and 1.1% (n=2) strongly disagreed that the people they worked with were friendly. Table 5.28 presents the data below.

Table 5.28: People they work with were friendly (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	15	8.5
	Agree	124	70.1
	Strongly agree	34	19.2
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.3.9 People they work with encourage each other to work together

The study revealed that 63.3% (n=112) of the participants agreed, and 17.5% (n=31) strongly agreed that the people they worked with encouraged each other to work together. Fifteen percent [15.3% (n=27)] of the participants disagreed, and 1.1% (n=2) strongly disagreed that the people they worked with encouraged each other to work together. Table 5.29 presents the data below.

Table 5.29 People they work with encourage each other to work together (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	27	15.3
	Agree	112	63.3
	Strongly agree	31	17.5
	Total	172	97.2
Missing		5	2.8
Total		177	100.0

5.3.3.10 People they work with were helpful in getting the job done

The study revealed that 70.1% (n=124) of the participants agreed, and 16.9% (n=30) strongly agreed that the people they worked with helped to get the job done. Eleven percent (10.7%) of the study participants (n=19) disagreed, and 1.1% (n=2) strongly disagreed that the people they worked with helped to get the job done. Table 5.30 presents the data below.

Table 5.30: People they work with were helpful in getting the job done (N=177)

		Frequency	Percent
	Strongly disagree	2	1.1
	Disagree	19	10.7
	Agree	124	70.1
	Strongly agree	30	16.9
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.4 Section E: Perceived Stress Scale (PSS)

This section was included in order to establish the experience of participants of their perception of stress in the past month according to the perceived stress scale.

5.3.4.1 Frequency of being upset about something that happened unexpectedly whilst they were at work

The study showed that 45.8% (n=81) of the participants had sometimes been upset because of something that happened unexpectedly while they were at work. Twenty-four percent [24.3 % (n=43)] of the participants were upset fairly often because of something that happened unexpectedly while they were at

work. Seven percent [7.3% (n=13)] of the participants had been upset very often because of something that happened unexpectedly while they were at work. Fifteen percent [15.3% (n=27)] of the participants had never felt upset because of something that happened unexpectedly while they were at work. Only seven percent [6.8% (n=12)] of the participants had almost never been upset because of something that happened unexpectedly while they were at work. Table 5.31 presents the data below.

Table 5.31: Frequency of being upset about something that happened unexpectedly whilst they were at work (N=177)

		Frequency	Percent
	Never	27	15.3
	Almost Never	12	6.8
	Sometimes	81	45.8
	Fairly Often	43	24.3
	Very Often	13	7.3
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.4.2 Frequency of feeling they were unable to control important things in their work life

The study showed that 22.6 % (n=40) of the participants had never, and 18.1% (n=32) had almost never felt they were unable to control the important

things in their work life. Forty percent [40.1% (n=71)] of the participants had sometimes, and 13.0% of (n=23) had fairly often, while 5.1% (n=9) had very often felt they were unable to control the important things in their work life. Table 5.32 presents the data below.

Table 5.32: Frequency of feeling they were unable to control important things in their work life (N=177)

		Frequency	Percent
	Never	40	22.6
	Almost Never	32	18.1
	Sometimes	71	40.1
	Fairly Often	23	13.0
	Very Often	9	5.1
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.4.3. Frequency of feeling nervous and stressed

The study revealed that 14.1 % (n=25) of the participants had never, and 8.5% (n=15) had almost never felt nervous and stressed, whereas 36.2% (n=64) of the participants had sometimes, 27.1% (n=48) had fairly often, while

13.6% (n=24) had very often felt nervous and stressed. Table 5.33 presents the data below.

Table 5.33: Frequency of feeling nervous and stressed (N=177)

		Frequency	Percent
	Never	25	14.1
	Almost Never	15	8.5
	Sometimes	64	36.2
	Fairly Often	48	27.1
	Very Often	24	13.6
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.4.4. Frequency of dealing successfully with irritating work hassles

The study showed that 8.5 % (n=15) of the participants had never, and 11.3% (n=20) had almost never dealt successfully with irritating life hassles at work. However, 29.9 % (n=53) of the participants had sometimes, 35.0% (n=62) had fairly often, and 14.7% (n=26) had often dealt successfully with irritating life hassles at work. Table 5.34 presents the data below.

Table 5.34: Frequency of dealing successfully with irritating work hassles (N=177)

		Frequency	Percent
	Never	15	8.5
	Almost Never	20	11.3
	Sometimes	53	29.9
	Fairly Often	62	35.0
	Very Often	26	14.7
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.4.5 Frequency of feeling confident about ability to handle own work-related problems

The study showed that only 2.8 % (n=5) of the participants had never, and 2.3% (n=4) had almost never felt confident about their ability to handle work-related problems. Forty percent [40.1% (n=71)] of the participants had felt confident fairly often about their ability to handle work-related problems. Thirty-four percent [34.5% (n=61)] of the participants had a feeling of confidence very often. Twenty percent [19.8% (n=35)] of the participants indicated that they sometimes felt confident about their ability to handle their work-related problems. Table 5.35 presents the data below.

Table 5.35: Frequency of feeling confident about ability to handle work-related problems (N=177)

		Frequency	Percent
	Never	5	2.8
	Almost Never	4	2.3
	Sometimes	35	19.8
	Fairly Often	71	40.1
	Very Often	61	34.5
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.4.6 Frequency of finding out they were not coping with all things they had to do at work

The study showed that 24.3 % (n=43) of the participants had never, and 18.6 (n=33) had almost never found that they could not cope with all the things that they had to do at work. Thirty-five percent [35.6% (n=63)] of the participants had sometimes, 13.0 % (n=23) had fairly often, while 7.3% (n=13) had very often found that they could not cope with all the things they had to do at work. Table 5.36 presents the data below.

Table 5.36: Frequency of not coping with all things they had to do at work (N=177)

		Frequency	Percent
	Never	43	24.3
	Almost Never	33	18.6
	Sometimes	63	35.6
	Fairly Often	23	13.0
	Very Often	13	7.3
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.4.7 Frequency of being able to control irritations in their work life

This item was included in order to establish from the participants the frequency of being able to control irritation in their work life.

The study revealed that most participants, 31.6% (n=56), had sometimes, 35.6% (n=63) of the participants had fairly often, and 10.7% (n=19) had very often been able to control irritations in their work life. The same number of participants as in the very often response category, 10.7% (n=19), had never, while 8.5% (n=15) had almost never been able to control irritations in their work life. Table 5.37 presents the data below.

Table 5.37: Frequency of being able to control irritations in their work life (N=177)

		Frequency	Percent
	Never	19	10.7
	Almost Never	15	8.5
	Sometimes	56	31.6
	Fairly Often	63	35.6
	Very Often	19	10.7
	Total	172	97.2
Missing		5	2.8
Total		177	100.0

5.3.4.8 Frequency of feeling that they were on top of things at work

The study showed that 35.0 % (n=62) of the participants had sometimes, and 31.6% (n=56) had fairly often had a feeling of being on top of things at work; while 2.8% (n=5) had never felt and 10 percent [10.2% (n=18)] had almost never felt they were on top of things at work. Table 5.38 presents the data below.

Table 5.38: Frequency of feeling that they were on top of things at work (N=177)

		Frequency	Percent
	Never	5	2.8
	Almost Never	18	10.2
	Sometimes	62	35.0
	Fairly Often	56	31.6
	Very Often	32	18.1
	Total	173	97.7
Missing		4	2.3
Total		177	100.0

5.3.4.9 Frequency of being angered because things that happened at work were outside of their control

The study showed that 10.2% (n=18) of the participants had very often, 13.6% (n=24) had fairly often, and 37.9% (n=67) had sometimes been angered because of things that happened at work that were out of their control. Eighteen percent [18.1% (n=32)] of the participants had almost never, while [19.2% (n=34)] had never been angered because of things that happened at work that were out of their control. Table 5.39 presents the data below.

Table 5.39: Frequency of being angered because things that happened at work were outside of their control (N=177)

		Frequency	Percent
	Never	34	19.2
	Almost Never	32	18.1
	Sometimes	67	37.9
	Fairly Often	24	13.6
	Very Often	18	10.2
	Total	175	98.9
Missing		2	1.1
Total		177	100.0

5.3.4.10 Frequency of thinking about things that they had to accomplish at work

The study revealed that 15.8% (n=28) of the participants had very often, while 31.6% (n=56) had fairly often thought about things that were not accomplished at work. Forty-one percent [41.2% (n=73)] of the participants sometimes found themselves thinking about things that they had to accomplish at work. Four percent [4.5% (n=8)] of the participants had never and 5.1% (n=9) had almost never found themselves thinking about things that they had to accomplish at work. Table 5.40 presents the data below.

Table 5.40: Frequency of thinking about things that they had to accomplish at work (N=177)

		Frequency	Percent
	Never	8	4.5
	Almost Never	9	5.1
	Sometimes	73	41.2
	Fairly Often	56	31.6
	Very Often	28	15.8
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.4.11 Frequency of being able to control the way they utilise their time at work

The study showed that 2.8% (n=5) of the participants had never, and 9.0% (n=16) had almost never been able to control the way they utilised their time at work. Twenty-three percent [23.7% (n=42)] of the participants had very often, 36.7% (n=65) had fairly often, and 27.1% (n=48) had sometimes been able to control the way they utilised their time at work. Table 5.41 presents the data below.

Table 5.41: Frequency of being able to control the way they utilise their time at work (N=177)

		Frequency	Percent
	Never	5	2.8
	Almost Never	16	9.0
	Sometimes	48	27.1
	Fairly Often	65	36.7
	Very Often	42	23.7
	Total	176	99.4
Missing		1	.6
Total		177	100.0

5.3.4.12 Frequency of feeling that difficulties at work were piling up so high that they could not overcome them

The study showed that 33.3 % (n=59) of the participants had sometimes, 10.7% (n=19) fairly often, and 8.5% (n=15) had very often felt that difficulties at work were piling up so high that they could not overcome them. Twenty-three percent [23.7 % (n=42)] of the participants had almost never, and 22.0% (n=39) had never felt difficulties were piling up so high that they could not overcome them. Table 5.42 presents the data below.

Table 5.42 Frequency of feeling that difficulties were piling up so high that they could not overcome them (N=177)

		Frequency	Percent
	Never	39	22.0
	Almost Never	42	23.7
	Sometimes	59	33.3
	Fairly Often	19	10.7
	Very Often	15	8.5
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.4.13 Frequency of feeling that they were effectively coping with important changes that were occurring at work

The results showed that 13.6% (n=24) of the participants very often felt, and 39.0% (n=69) had fairly often felt, while 36.2% (n=64) had sometimes felt that they were coping with important changes that were occurring at work effectively. Two percent [2.8% (n=5)] of the participants had never felt and 6.8% (n=12) had almost never felt that they were coping with important changes that were occurring at work effectively. Table 5.43 presents the data below.

Table 5.43: Frequency of feeling that they were effectively coping with important changes that were occurring at work (N=177)

		Frequency	Percent
	Never	5	2.8
	Almost Never	12	6.8
	Sometimes	64	36.2
	Fairly Often	69	39.0
	Very Often	24	13.6
	Total	174	98.3
Missing		3	1.7
Total		177	100.0

5.3.4.14 Frequency of feeling that things at work were going their way

The results showed that 10.7% (n=19) of the participants had never, and 11.9% (n=21) had almost never felt that things at work were going their way. Almost nine percent [8.5% (n=15)] of the participants had very often felt that things were going their way. Almost thirty-one percent [30.5% (n=54)] of the participants had fairly often felt and 35.6% (n=63) had sometimes felt that things at work were going their way. Table 5.44 presents the data below.

Table 5.44: Frequency of feeling that things at work were going their way (N=177)

		Frequency	Percent
	Never	19	10.7
	Almost Never	21	11.9
	Sometimes	63	35.6
	Fairly Often	54	30.5
	Very Often	15	8.5
	Total	172	97.2
Missing		5	2.8
Total		177	100.0

5.4 NON-PARAMETRIC CORRELATIONS

The variables of interest in this study are job demand, job control (which includes decision-making latitude), social support and workplace stress perception.

5.4.1 Spearman's rho Test: Job control, job demand, social support and stress

Spearman's rank order test is a measure, which depicts the strength and nature of a relationship between two or more variables. When there is a perfect correlation it is represented as -1 or +1. A weak correlation is represented from .2 to .4. A positive correlation will have a corresponding direction of effect, whereas an inverse correlation will have the opposite

direction of effect. The test is used to make a difference in a specific group in a sample size that is equal to or above thirty in number Polit & Beck (2003).

Spearman's rho is used for rank ordinal data. In the JCQ and PSS analysis data was not in rank order. Data was recorded in order to run a non-parametric data analysis. There is a significant relationship between support and stress (R =0.318, p<0.000); job control and stress (R=0,265, p = 0.001); there is also a significant but weak relationship between job demand and social support (R=0.200, p=0.014). There is a significant relationship between job control and social support (R= 0.398, p= 0.000) as indicated in Table 5.45 below.

Table 5.45 Non-parametric correlations for job control, job demand, support and stress perception

			Job control	Job demand	Support	Stress
Spearman's rho	Job control	Correlation Coefficient	1.000	.126	.398(**)	-.265(**)
		Sig. (2-tailed)	.	.129	**.000**	**.001**
		N	166	146	155	157
	Job demand	Correlation Coefficient	.126	1.000	-.205(*)	.153
		Sig. (2-tailed)	.129	.	**.014**	.066
		N	146	152	144	145
	Support	Correlation Coefficient	.398(**)	-.205(*)	1.000	-.318(**)
		Sig. (2-tailed)	**.000**	**.014**	**.**	.000
		N	155	144	163	155
	Stress	Correlation Coefficient	-.265(**)	.153	-.318(**)	1.000
		Sig. (2-tailed)	**.001**	.066	**.000**	.
		N	157	145	155	165

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

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

5.4.2 Kruskal-Wallis test: Age

Age in relation to job control was not significant (X^2=2.89, df=4, p=0.58). Age in relation to job demand was highly significant (X^2=14.54, df=4, p=.006). Age and social support was not significant (X^2=2.19, df=4, p=0.699). Age and perception of stress was not significant. A correlation co-efficient is an index of summarising the degree of relationship between variables, typically ranging from +1.00 for a perfect positive correlation through 0.0 for no relationship. **p-value** is the probability that the results are due to chance alone, while **df** refers to the degrees of freedom, the significant difference between the test scores. Age in relation to job demand was highly significant; however, no direction of the relationship was established. Table 5.46 presents the data below.

Table 5.46 Test Statistics – Kruskal Wallis Test grouping variable by age

	Job Control	Job Demand	Social Support	Stress
Chi Square	**2.894**	**14.545**	**.925**	**2.198**
Df	**4**	**4**	**4**	**4**
p.value	**.576**	**.006**	**.921**	**.699**

5.4.3 Mann Whitney Test Grouping - variables by gender

When a non-parametric Mann Whitney test was performed against gender and job control, job demand, support and stress, there was no significant relationship established, as presented in Table 5.47 below.

Table 5.47: Mann Whitney Test Grouping by gender

	Test value	Z score	p value
Job control	931.50	0.90	0.37
Job demand	823.00	0.73	0.47
Social support	750.00	1.62	0.11
Stress	960.00	0.81	0.42

5.4.4 Kruskal-Wallis Test - Population groups by race

When race was assessed against the four domains/variables, namely: job control, job demand, social support and stress, there was a highly significant relationship especially between race and job demand (X^2 =20.99; df =3, p = 0.000); and race and social support (X^2 =12; 97; df=3; p = 0.000). There was a non-significant relationship between race and job control (X^2=3.72; df=3; p=0.29); and race and stress (X^2 =1.15; df=3; p=0.77). The assumption is that this can be attributed to the high representation of participants among Africans and Indians. Table 5.48 below presents the data.

Table 5.48: Chi-Square: Race and job demand, job control, social support and stress

	Job control	Job demand	Social support	Stress
Chi – Square	3.718	20.989	12.966	1.148
Df	3	3	3	3
P value	.294	.000	.000	.765

5.4.5 Kruskal-Wallis Test - Marital status

When marital status was assessed against the four domains; job control, job demand social support and stress, there was a significant relationship with social support (X^2 =6.78, df =2, p=0.03). There was no significant relationship established between marital status and job control (X^2 = 1.83, df=2, p=0.400). Marital status and job demand showed no significant relationship (X^2=4.03, df =2, p=0.133). Marital status and stress also showed no significant relationship (X^2=1.56, df=2, p=0.46). Table 5.49 below presents the data.

Table 5.49: Kruskal-Wallis Chi-Square test by marital status

	Job control	Job demand	Social support	Stress
Chi-Square	1.834	4.030	6.774	1.576
Df	2	2	2	2
P value	.400	.133	.034	.455

5.4.6 Kruskal-Wallis Chi-Square Test - Job Title

Job title had no significant relationship with the four variables/domains namely, job demand, job control, social support and stress as evidenced in Table 5.40 below.

Table 5.50 Kruskal-Wallis Test grouping by job title

	Test value	Df	Pvalue
Job control	0.28	2	0.87
Job demand	0.69	2	0.71
Social support	2.22	2	0.33
Stress	1.91	2	0.38

5.4.7 Kruskal-Wallis Test - Professional Ranks – Duration in current title in years

There was no significant relationship established between the participants' length of time spent in their current job title, i.e. job control and length of time in their current title (X^2 = 2.14, df=3, p=0.54); job demand and the length of time in their current title (X^2 =2.07, df=3, p=0.56); social support and length of time in their current job title (X^2=5.64, df=3, p=0,15) and stress and length of time in their current job title (X^2=0.24, df=3, p=0.97). See Table 5.51 below.

Table 5.51: Chi-Square: Job Demand, job control, social support, stress and duration in current title in years

	Job control	Job demand	Social support	Stress
Chi-Square	2.143	2.073	5.642	5.642
Df	3	3	3	3
P value	. 543	.557	.557	.971

5.4.8 Kruskal-Wallis Test - Duration as a professional nurse in years

There was no significant relationship between the domains as shown in Table 5.52 below.

Table 5.52: Kruskal-Wallis Chi-Square Test - Duration as a professional nurse in years

	X^2	Df	P value
Job control	2.75	3	0.43
Job demand	1.29	3	0.73
Social support	4.10	3	0.25
Stress	0.72	3	0.87

5.4.9 Kruskal-Wallis Chi-Square Test - Selected care units currently working in

There was a significant relationship between job demand and the unit where participants were working in (X^2=23.38, df=8, p=0.003). There was no significant relationship between the unit and job control (X^2=9.78, df = 8, p=0.28); social support (X^2=10.76, df=8, p=0.22) and stress (X^2=14.02, df=8, p=0.08). See Table 5.53 below.

Table 5.53 Kruskal-Wallis Chi-Square test: Selected care units currently working in and Job Demand, Job control, social support, and stress

	Job control	Job demand	Social support	Stress
Chi-Square	9.783	23.378	10.760	14.025
Df	8	8	8	8
Asymp. Sig.	.281	.003	.216	.081

5.4.10 Kolmogorov-Sminorv Test – Stress distribution

One sample Kolmogorov-Sminorv Test was used to check whether stress was normally distributed. It was found to be normally distributed. See hypothesis summary Table 5.54 below.

Table 5.54: Kolmogorov-Smirnov Test - Stress distribution

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of stress is normal with mean 34.285 and standard deviation 5.903.	One-Sample Kolmogorov-Smirnov Test	.374	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

5.4.11 Hypothesis Testing Summary

A null hypothesis is a statement, which expresses that the relationship does not exist between or among the variables and it is used to reject the hypothesis.

Fourteen items were used to estimate stress in nurses. Nurses were asked to indicate how often they experienced stress-related feelings, thoughts or conditions. The responses were structured so that the lower the score, the lower the chances of experiencing that stress-related condition. These are the options and values specifically assigned to them: never =1; almost never =2; sometimes=3; fairly often=4 and very often=5. The scores of the negatively phrased questions were reversed for scoring.

Since there were 14 of these items, the lowest possible stress score is 14, which implies no stress at all. The highest possible stress score is 70 implying the highest level of stress. A stress score of 28 and below gives an indication that the nurse rarely experienced stress-related conditions. A score between 29 and 42 meant that the nurse occasionally experienced some of these stress-related conditions.

In this study the average score was between 29 and 42; thus the majority of nurses experienced stressful conditions occasionally. The maximum score observed was 49; therefore, in general, the nurses were not highly stressed. Table 4.64 presents the data below.

Table 5.55: - Perceived stress scale – Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Stress	165	20.00	49.00	34.2848	5.90350
Valid N (least wise)	165				

5.4.12 Stress Percentile Scales

The median score of stress is 35 and the 75th percentile of stress is 39. This shows clearly that at least 75% of the study participants didn't experience a lot of stress at work. Table 5.56 presents the data below.

Table 5.56 : Stress Percentile Scales

Statistics

Stress

N	Valid	165
	Missing	12
Mode		37.00
Minimum		20.00
Maximum		49.00
Percentiles	25	30.0000
	50	35.0000
	75	39.0000

5.4.13 Job Demand Distribution

There were 10 questions relating to job demand, each with a score ranging from 1 to 4. Specifically: Strongly disagree=1; disagree=2; agree=3 and strongly disagree=4. Thus the minimum expected score was 10. A score of 20 meant that the nurse did not feel any job demand. A score of 30 meant that the nurse did agree to having felt some level of job demand. The highest score expected was 40, which indicated a high level of job demand.

A cut of 30 was decided upon to distinguish between low job demand and high job demand. In total, 75 nurses indicated low job demand and 77 indicated high job demand.

5.4.14 Job Demand job control frequency distribution

In the same way, a score of below 33 meant low job control while any score from 34 upward meant high job control. Sixty-one participants (87.1%) indicated that they had high job demand and high job control. Table 5.58 presents the data below.

Table 5.58: Job demand job control distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High demand high control	61	34.5	87.1	87.1
	High demand low control	9	5.1	12.9	100.0

	Total	70	39.5	100.0	
Missing	System	107	60.5		
Total		177	100.0		

Table 5.59: T-test for job demand job control distribution

Group Statistics

	Demandcont	N	Mean	Std. Deviation	Std. Error Mean
Stress	high demand high control	59	34.5593	5.25315	.68390
	high demand low control	8	31.7500	6.75595	2.38859

Table 5.60: Independent sample test for equality of variance

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Stress	Equal variances assumed	.760	.386	1.372	65

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Stress	Equal variances assumed	.760	.386	1.372	65
	Equal variances not assumed			1.131	8.188

5.4.15 Independent samples test for equality of means

Two independent sample t-tests were used to test whether there was any significant difference in stress levels between nurses who reported having high demand and high job control and nurses who had high demand and low job control. According to the t-test there is no significant difference in stress levels between the two groups (p=0.175). Tables 5.61 and 5.62 present the data.

Table 5.61: Independent sample test for equality of means

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Stress	Equal variances assumed	.175	2.80932	2.04769
	Equal variances not assumed	.290	2.80932	2.48457

Table 5.62: Independent samples test for equality of means

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Stress	Equal variances assumed	-1.28021	6.89885
	Equal variances not assumed	-2.89727	8.51592

5.4.16 Job Demand

There were 10 questions relating to job demand, each with a score ranging from 1 to 4. Specifically: Strongly disagree=1; disagree=2; agree=3 and strongly disagree=4. Thus the minimum expected score was 10. A score of 20 meant that the nurse did not feel any job demand. A score of 30 means the nurse did agree to have felt some level of job demand. The highest score expected is 40, which indicates a high level of job demand.

A cut off at 30 was decided to distinguish between low job demand and high job demand. In total, 75 nurses had indicated low job demand and 77 indicated high job demand.

Table 5.63 :Job demand distribution

Statistics

Demandcont

N	Valid	70
	Missing	107

5.4.17 Job demand job control distribution

In the same way a score of below 33 meant low job control while any score from 34 upward meant high job control. Sixty-one participants (87.1%) indicated that they had high job demand and high job control. Table 5.64 presents the data below.

Table 5.64 Job demand job control distribution

Demandcont

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High demand high control	61	34.5	87.1	87.1
	High demand low control	9	5.1	12.9	100.0
	Total	70	39.5	100.0	
Missing	System	107	60.5		
Total		177	100.0		

Table 5.65:t-test for job demand job control distribution

Group Statistics

	Demandcont	N	Mean	Std. Deviation	Std. Error Mean
Stress	High demand high control	59	34.5593	5.25315	.68390
	High demand low control	8	31.7500	6.75595	2.38859

Table 5.66: Independent samples test for equality of variances

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Stress	Equal variances assumed	.760	.386	1.372	65
	Equal variances not assumed			1.131	8.188

5.4.18 Independent samples test for equality of means

Two independent samples t-tests were used to test whether there was any significant difference in stress levels between nurses who reported having high demand and high job control, and nurses who had high demand and low job control. According to the t-test there was no significant difference in stress levels between the two groups (p=0.175). Table 5.68 presents the data.

Table 5.67: Independent samples test for equality of means

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Stress	Equal variances assumed	.175	2.80932	2.04769
	Equal variances not assumed	.290	2.80932	2.48457

Table 5.68: Independent samples test for equality of means

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Stress	Equal variances assumed	-1.28021	6.89885
	Equal variances not assumed	-2.89727	8.51592

5.5 CONCLUSION

In Chapter Four the results were presented according to demographics, descriptive statistics of the variables job demand, job control social support and stress perception as well as non- parametric testing. Significant relationships were identified between age and job demand; race and job demand; race and social support; marital status and social support, special care unit currently working in and job demand. Finally, a significant relationship was established between job control and stress, including job control and social support however the directions of relationships were not determined. The next chapter presents a discussion of the findings, conclusions and recommendations.

CHAPTER 6

DISCUSSION OF RESULTS, RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

In this chapter, the discussion of results is presented in the context of the conceptual framework, objectives of the study and existing literature in the area of the study. Conclusions will be deduced from the discussion, and recommendations made in relation to practice, education management and research. The purpose of the study was to describe the relationship between job demand, job control, social support and perceptions of workplace stress. Participants were drawn from the clinical nursing areas in the five health care institutions (hospitals) in Umgungundlovu Health District, KwaZulu-Natal.

6.2 DISCUSSION OF RESULTS

A discussion of the results is presented according to demographics (personal data), descriptive statistics for variables: job demand, job control, social support and stress perception, non-parametric and hypothesis testing results.

6.2.1 Demographics

The following demographic information was obtained; age, gender, population group, marital status, job title, duration in the job title, duration in the professional nurse ranks and nursing units currently working in.

6.2.1.1 Age

Thirty six percent of the participants (n=64) fell in the age range of 26-35 years, with 36.6% (n=56) in the age range of 46-55 years. The participants were even fewer in the mature or elderly category of participants, six in the age range 56-60 years. Kruskal Wallis test grouping by age, table 4.55, revealed a strong significant relationship between age and job demand. Cieslak, Knoll, & Luczczynska, (2007) support the relationship between age and job demand. This study revealed that the more mature or elderly employees are, the more they express decreased social support as opposed to the younger employees. On the contrary, the younger employees express increased perception of job demands as compared to the more mature or elderly employees, Cieslak, et al., (2007).

In the current study age was significant to job demand. Wu, Zhu, Wang & Lan (2007) state that the younger the nurse is in age, the stronger the perception of stress from the workplace circumstances are. In a study conducted among Greek registered nurses, Maria, Pavlos, Eleni, Thamme & Constanidis (2010) discovered that the age of thirty-six years is a cut-off point in relation to perception of workplace stress and job satisfaction. Below the age of thirty-six years, the perception of workplace stress was high as opposed to perception of work satisfaction.

6.2.1.2 Gender

The majority of participants were females, about 81.9% (n=145), while males constituted a lesser number with seventeen participants, at 9.6%. The Mann Whitney test grouping by gender table 4.56 revealed that there was no significant relationship against gender and job demand, job control, support and stress. Cieslak, et al., (2007) state that elderly female employees perceive less job control as opposed to younger female employees who perceive that they exercise more job control. Among the elderly and younger

employees there are no variations in perceptions of job demand and job control. Nursing is an occupation, which is female dominated. The overall perception of workplace circumstances by female employees, the young or even more mature and elderly nurse employees is that of excessive job demand and low social support.

In the current study there was no significant relationship against gender, job demand, job control, social support and perception of workplace stress. In their study between civilian and military Greek nurses, Maria, Pavlos, Eleni, Thamme & Constantinidis (2010) found that the participants' ratios were such that ninety-five percent of the civilian nurses were women, and thirty-nine percent were military nurses and were men. The significance value of the perception of workplace stress among Greek nurses was p =0.041. The rationale that these authors advance is that medical doctors, who are mostly male, dominate Greek hospitals. Under these circumstances, according to these authors, nurses are subjected to excessive job demands with limited decision-making latitude and job control. The interdisciplinary collaboration in these hospitals is obstructed. Mojoyinola (2008) states that when men are afforded an opportunity to exercise decision-making latitude, they manifest less physical symptoms of burnout and display reduced stress perceptions. According to Mojoyinola (2008), in the absence of job control, in the presence of increased job demands and in the absence of social support there is a likelihood of manifestations of perceived workplace stress and sub-optimal mental health. Dovlo (2007) states that in sub-Saharan Africa, ten percent of nurses are male and female nurses are in the majority. Jennings (2003) states that the nursing profession is predominantly female. Additional family obligations maximise the excessive workload demands.

Hensing & Alexanderson (2000) found that there are associations between absenteeism due to sickness and sex differences. Females in male-dominated occupations, which are also referred to as white-collar occupations rated high in sickness absenteeism. This is in contrast with females in female-

dominated occupations, like nursing. In nursing, females occupy a dominant position, in terms of numbers, which reverses the pattern as in white-collar jobs (Hensing & Alexanderson, 2000).

6.2.1.3 Population group

The study revealed that almost 59.9% of the participants were African (n=106) with the next group of forty-eight participants 27.1%) being Indians. Whites made up 8.5% of the study population and the lowest number was for the Coloureds in the study population. Table 4.57 reveals that there was no significant relationship between race and job control, race and perceived stress.

This study revealed a strong and significant relationship between population, race and job demand; p= 0.000. In a study of Chinese nurses, Mojoyinola (2008), the study findings revealed that perceived workplace stress results in poor mental health and poor coping abilities. About fifty-five percent of nurses in Chinese public hospitals reported increased perceptions of workplace stress. In the assessment of the impact of out-migration on health systems in sub-Saharan Africa, Dovlo (2007) asserts that staff-patient ratio is such that, for every one thousand population, there is one nurse practitioner. This ratio, according to Dovlo (2007) is a factor, which contributes to excessive job demands.

6.2.1.4 Marital Status

The majority of the participants were married, constituting 55.4% (n=98), while 33.9% of the participants were single. The participants who were divorced, separated and widowed altogether constituted 9.6% of the study population, as reflected in table 4.4

There was no significant relationship between marital status, job, and perceptions of workplace stress, as reflected in table 4.58. Thorsen, Tharp & Meguid (2011) state that employees who have the responsibility of raising children, doing domestic chores, and a duty to take care of a spouse, experience more pressures as nurses. If the spouse is not supportive, burnout is likely to result with a reduction of performance levels in the workplace (Thorsen, Tharp & Meguid, 2011).

6.2.1.5 Job title

The majority of participants were at the entry level of professional nurses' ranks. Forty eight percent of the participants (n=85) were at the lowest or unit operational or functional level, as shown in table 4.5. The lowest number of professional nurses was the middle level unit senior professional nurses who made 15.3% (n=27). The second highest number was for the chief professional nurses who were at the unit management level and are charged with management and supervision responsibilities in the unit.

Table 4.59 reveals that there was no relationship between job title, job control, job demand, social support and perceived workplace stress in the present study. Golubic et al (2009), states that the nursing education system in Croatia hampers academic and professional career-paths and that this is seen as a factor in excessive job demands and decreased job control. According to Golubic et al (2009) an enrolled / staff nurse in a South African professional title is equivalent to a general nurse in Croatia, and that such nurses do not have prospects of furthering their studies as opposed to nurses with a nursing degree qualification. Van der Colff & Rothmann (2009) indicate that registered nurses who perceived their work environment to be lacking in support, perceived their work circumstances as laden with increased work demands and stressors.

6.2.1.6 Duration in the professional nurses' ranks

The study revealed that 29.9% (n=53) of the participants had been in the current professional nurse entry-level title for two years, as reflected in table 4.6. A higher number of about 34.55 % (n=61) had been in the current title for almost five years, whilst the lower percentage of 15.8% (n=28) had been in the current title for more than ten years. There could be challenges of workplace experience and retention with a possibility of high attrition rates experience at entry level.

There was no significant relationship between the duration in title and job control, job demand, social support and perception of workplace stress, as reflected in table 4.60. Coomber et al (2007) cites high workload, as in job demand, as a factor in the high turnover, but this is only applicable to hospitals in Taiwan.

6.2.1.7 Duration in current job title in years

The higher percentage of participants, 34.5% (n=61) had been in professional nurses ranks for more than ten years, mostly at the unit operational level. The next higher percentage 25.4% (n=45) was that of professional nurses that were at the entry level. The lowest percentage 20.3% (n=360 was that of professional nurses who had been professional nurses for more than six years, but less than ten years, as shown in table 4.7.

There was no relationship between the current job title, job control and the length of time spent in their current title, as it is shown in table 4.60. Coomber & Barribal (2007) state that employees may not express their perceptions of job demand and workplace stress since some employees weigh their workplace context in a more private and individual level.

6.2.1.8 Selected care units

Table 4.8 shows that 42.9% (n=76) of the participants were drawn from the nursing units that were identified as other, while a third accounted for the ones in outpatients, accident and emergency, operating theatre, medical, surgical, orthopedic and maternity nursing units.

There was a significant relationship between job demands and units where participants were working in; with the value of p=0.003, as shown in table 4.62. There was no relationship between job control and the unit where participants were currently working in. Smit (2005) exposes an element of social dimensions cited as nurses' experience when they are caring for patients who are HIV positive or are living with AIDS in South Africa. The nurses are subjected to physical and emotional exhaustion and manifest symptoms of perceived workplace stress. Wu, Zhu, Wang & Lan (2007) state that nurses who were placed in the medical and surgical wards in China reported excessive work overload, role insufficiency and increased perceptions of workplace stress. Nursing is a high stress job due to its own critical nature and demands situational and high decision making which in the absence of social support, does exert job demands and increased perceptions of stress (Wu, Zhu, Wang & Lan 2007).

6.2.2 Job demand

Job demand is expressed as psychological demands in the data collection instrument. The study findings indicated that there were areas where participants agreed and strongly agreed in support of perceived job demands. Out of the nine elements in this section, two items were rated in the negative sense, which means that the participants gave 64.4% and 66.7 respectively to the contrary of perceived job demands. They agreed and strongly agreed that they were not asked to do excessive work, and that they were free from conflicting demands.

Eight items in this section do confirm that participants agreed and strongly agreed that they were experiencing job demands, as captured in the following items: jobs require them to work fast rated 88.7% in table 4.21; they were expected to work very hard rated 93.3% in table 4.22; they did not have enough time to get the job done rated 54.8% in table 4.24; jobs required long periods of concentration rated 82.5% in table 4.26; tasks often interrupted before they can complete them rated 71.2% in table 4.27; feeling that their jobs were hectic rated 70.7% in table 4.28.

Age and job demand was highly significant; p=0.006. The younger the nurse, the higher the incidence of reported workplace stress perceptions (Wu, Zhu, Wang & Lan, 2007). Age and job control was not significant; there was no significance with age and social support, age and perception of workplace stress. Maria et al., (2010) states that there is more job satisfaction among older nurses with the significance value of p=0.001; as well as reporting greater job satisfaction among nurses who have more work experience. Jennings (2003) states that there is a direct relationship between job demands and family demands that requires further exploration.

6.2.3 Job control

Twelve items were used for the measurement of this variable, which included decision-making latitude. Two items on this section rated 92.1% (n=163) and 87% (n=154) respectively, in which the participants agreed and strongly agreed that their jobs required the learning of new skills which indicates that there is more job demand with limited latitude to decision making, as well as performing repetitive tasks with limited decision making. The rest of the ten items in this section revealed that participants do exercise decision-making latitude and job control with less perceived workplace stress.

There was no significant relationship between gender, job demand, job control, social support and perceived stress. Golubic et al. (2009) revealed that academic and professional education levels influence the perception of

workplace stress as opposed to nurses who hold a Bachelor's degree in Nursing in Croatia. Nurses who enter nursing from a secondary school level, as opposed to having college qualifications, are less educated in nursing, and perceive excessive job demands and workplace stress due to limited preparation and placement in their organisational hierarchy with limited opportunities to exercise decision-making latitude. Individual female employees who have the latitude to determine and negotiate working hours and work flexi-time when and as personal need arises, report less burn-out and exhaustion, as opposed to female nurses who follow an imposed duty schedule (Golubic et al. 2009).

6.2.4 Social support

Twelve items were used in the instrument to measure this variable. One item was rated in favour of lack of social support, 35.1% while 64.9% was rated in favour of available social support. The item referred to here is the exposure to hostility and conflict with people that they work with. The rest of the items were rated in favour of social support: colleagues and supervisors concerned about their wellbeing, and take a personal interest in other employees; success in getting people to work together; colleagues who are friendly; colleagues who help to get the job done. The ratings in these items ranged between 55.9% and 87.6% in favour of social support.

There was a highly significant relationship between job demand and social support. Dovlo (2007) states that in sub-Saharan Africa there are less mid-level or ancillary workers, and that cost containment plans command the reduction of training numbers which becomes an excessive job demand for practicing nurses. The scourge of HIV/AIDS compounds the situation with regards to the imbalance of supply and demand, so far as staffing ratios are concerned. Van Der Colff & Rothmann (2009) state that nurses, who perceive their work circumstances as low in social support, are prone to making mistakes and experiencing conflicting messages from their supervisors, which reduces their competence. Their confidence levels are

diminished, and they are not free to exercise decision-making latitude (Van Der Colff & Rothmann, 2009).

6.2.5 Perceived workplace stress

In the present study, the age of participants was highly significant to job demand though the direction of the relationships was not established. Naudé, JLP & Rothmann, S. (2006), state that nurses who are practicing in emergency care are most likely to perceive their work circumstances as highly stressful. Lambert & Lambert (2001) state that nurses in South Africa work under stressful conditions that include defective communication patterns between the employees and supervisors, racial differences, salary disparities, inadequate supervisor support and a host of unpleasant work conditions.

6.2.6 Statistical relationships and associations

Statistical relationships and associations for the variables, job demand, job control social support and perceived stress were established, as follows:

6.2.6.1 Job demand and stress

The Kolmogorov-Smirnov stress score revealed that nurses rarely perceived their workplace experiences as stress provoking. Those who did experience or perceive their workplace circumstances as stress provoking reported this as an occasional occurrence. The perceived stress scale scores were just above the cut-off point, which is at the value of 28 and ranged between 29 and 42.

6.2.6.2 Job control and stress

The job demand job control frequency distribution indicated that there was a higher rate of about eighty-seven percent, which meant that nurses were exercising job control in order to meet their job demands. Spearman's rho test revealed a significant relationship between job control and stress, p= 0. 001

6.2.6.3 Social support and stress

Spearman's rho revealed a significant relationship between social support and stress, R = 0.318, as shown in table 4.54. There is a significant but weak relationship between job demand and social support. The responses were varied between those who reported that their supervisors were concerned about their welfare in the workplace and were helpful, and the few who reported that they were subjected to hostility from their supervisors. Langford, Bowsher, Maloney & Lillis (1997) state that a conducive workplace environment whereby supervisors encourage their employees with accessible task performance policies, constructive feedback mechanisms and climate meetings modifies perceived workplace stress.

6.2.6.4 Perceived stress and stress

Table 4.64 shows that almost 75% of the participants did not experience excessive job demands and stress at the workplace. The Kolmorov-Smirnov test revealed that the nurses did not report perceived workplace stress.

6.3 CONCLUSION OF THE STUDY

There was a strong relationship between age and job demand, race and job demand and race and social support. There was a significant relationship between job demands, the unit the participant was currently working in, marital status and social support. There was a weak relationship between job demand and social support. There was no relationship between the unit the participant was currently working in and job control, social support and stress. There was no relationship between marital status and job demand. No relationship was established between job title and job demand, job control, social support and stress. No relationship was established between age and job control, race and job control, and age and stress.

The research objectives were to assess the perceived levels of stress of nurses working in public hospitals in terms of job demands, job control and social support as well as to establish the relationship between perceived job demands, job control, support and the perceived levels of stress among nurse working in selected care units.

For the first objective, seven out of nine items, which measured job demands; it was revealed that professional nurses do experience excessive job demands or psychological demands. For the second study objective where the perceived stress scale was used, it was revealed that seven items out of fourteen the participants had sometimes, fairly often and very often experienced perceived stress whereas six were to the contrary. One item was not decisive to whether the participants were experiencing perceived workplace stress or not.

The Kolmogorov Smirnov Hypothesis test revealed that stress distribution is normal, thus the null hypothesis is retained.

6.4 RECOMMENDATIONS FOR PRACTICE

The study findings along with the reviewed literature highlighted a number of possible recommendations for practice that relate to work-related stress. As a way of reducing the risk of work-related stress, literature reviewed within the current study concludes that work related stress can be ameliorated by ensuring a number of actions including:- (i) that nurses be placed in clinical nursing areas according to their suitability, role clarification and opportunities to explore continuing professional education.

(ii) There must be an availability of psychological support for nurses who are on the lower end of the organisational hierarchy to manipulate excessive job demands. This is intended to minimise the lack of job control that has been associated with increased work-related stress.

(iii) Staff must be orientated to supervisory roles and functions, teamwork for sharing expertise and skill mix, corrective feedback and clear communication mechanisms, consultation for participative change management.

(iv) It is important to develop robust performance appraisal systems, which allow the individual employee and the supervisor and/or management, to identify performance gaps and incorporate consideration of these suggestions or input when staff development programmes are planned at institutional level.

(ii) The lack of clear communication between the employee and the employer is a well documented barrier in the management of work-related stress and to minimise this, a clear system of communication has to be entrenched to promote transparency and avoid ambiguity, at the same time ensuring the development of clear feed-back mechanisms.

Beyond the above-identified managerial recommendations, a number of education-based recommendations have emanated from the current study. These include: -

(i) That there should be open career opportunities to up-skill those who have entered nursing in the lower ranks. There is a need for interdisciplinary collaboration, according to these authors, for workload distribution.

(ii) Nurse preparation and community nursing service after completion of basic nurse training have to aim at sensitising the professional nurse with various and selected nursing units before they move to clinical specialisation areas and selected units. This has to be coupled with an attractive remuneration package so as to deter professional skilled nurses from leaving the country in search of attractive salary packages in other provinces and or other countries.

6.4.1 Recommendation for future research

Patrician, Shang, Lake (2010) state that there is a need to accommodate and include patient outcomes data for informed integrative research. Again, a combination of both qualitative and quantitative methods, according to these authors, may yield better findings. Individual and focussed Group Interviews may reveal tangible experiences in the area of job demand, job control and social support.

6.5 LIMITATIONS

The present study utilised a quantitative approach using the Job Content Questionnaire and the Perceived Stress Scale instruments which, according to Lim, et al. (2010) and Glazer & Gyurak (2008) in Jannati, et al. (2011), have been criticised for lacking alignment to the culture of the society they are used in, especially pertaining to an instrument which was developed in Western societal context. According to these authors, it is believed that a qualitative approach could bridge this limitation.

Qualitative research in this study would have yielded in-depth insight into the workplace-related issues. This study cannot indicate with confidence how the variables can be influenced to manipulate stress towards the positive outlook of work life. A qualitative approach could have been adopted to shed more light on the perception of workplace stress.

The direction of the relationship among the variables of this study was not established. This is believed to be attributed to the number of study participants, which is below two hundred. Polit & Hungler (1997) state that if the study participants are less than two hundred in number, it is not possible to support the hypothesis, which would have been supported in a bigger sample size.

6.6 CONCLUSION

This chapter discussed the presentation of findings, both descriptive and non-parametric statistical findings. Recommendations for practice, management, education and future research were presented in the context of the research purpose, objectives and research questions. The limitations to the study were cited.

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APPENDIX A

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RESEARCH ETHICS COMMITTEE

Student: Mrs N.C. Majola 9510252588

Research Title: Workplace Stress among Nurses in Selected Special Care Units

A. The proposal meets the professional code of ethics of the Researcher:

(YES) NO

B. The proposal also meets the following ethical requirements:

	YES	NO
1. Provision has been made to obtain informed consent of the participants.	✓	
2. Potential psychological and physical risks have been considered and minimised.	✓	
3. Provision has been made to avoid undue intrusion with regard to participants and community.	✓	
4. Rights of participants will be safe-guarded in relation to: 4.1 Measures for the protection of anonymity and the maintenance of confidentiality.	✓	
4.2 Access to research information and findings.	✓	
4.3 Termination of involvement without compromise.	✓	
4.4 Misleading promises regarding benefits of the research.	✓	

Signature of Student: N.C. Majola Date: 25 Augusi 2003

Signature of Supervisor: Date: 25/8/2003

Signature of Head of School: Date: 25/8/2003

Signature of Chairperson of the Committee: Date: 08/09/03
pp (Professor F Frescura)

APPENDIX B

INFORMED CONSENT FORM

1. I .....understand that I am being asked to participate in a study conducted at .....The study will evaluate perceptions of workplace stress by registered nurses working in selected areas in public Hospital, Umgungundlovu Health District-Kwa Zulu Natal

2. I fully understand that if I agree to participate in the study, I will enter my responses on the questionnaire paper s provided, and it will be for about half an hour (30 minutes)

3. It has been explained to me that my participation in this study is entirely voluntary, and I may withdraw from the study at any time as I so wish without being discriminated.

4. I understand that all the study information will be kept confidential. My personal particulars will not be used, but responses will be coded, however the information may be used in nursing publications and presentations.

5. Should a need arise; I may contact the researcher at any time during the study.

6. My questions have been explained to my satisfaction, I have also read through the consent form with understanding.

Participant's Signature_____ Date_____

Witness's Signature_____ Date_____

Researcher's Signature_____ Date_____

APPENDIX C

APPENDIX C

Version 1.7 - 2/97 - w/o usage costs

Simplified Form A- Supersedes Sect. IV of Job Content questionnaire User's Guide v 1.1 1985
Sign this form and return it immediately to the JCQ Center -

Contract for Use of the Job Content Questionnaire for Research Use

The JCQ instrument, now translated into more than ten languages, is one of the most frequently used instruments in the world for psycho-social job analysis. Return of a copy of the JCQ data is required of medium and larger sized projects (over 100 subjects [see note below*]). This insures for the JCQ instrument adequate treatment of scale validation issues and attention to scale strengths and weaknesses: specifically: (a) consistency of JCQ scale use; (b) revalidation of the questionnaire scales - including revalidation for important sub-populations; (c) performance of inter-group comparisons between non-representative sub-population; (d) facilitation of understanding of sources of scale covariance variance from demographics, industry, occupational, organizational and community factors; and (e) development of new JCQ scales. Your cooperation can help insure that the JCQ instrument has a long-term future.

User/Study Director:Lungi Mkize
Study Name: Factors associated with perceived work related stress among nurses working in specialized health care units
Research Institution: University of Natal
Address: King George Ave.
Durban S.Africa

Permission for use of the Job Content Questionnaire is granted to the Study Director for the above study with the following requirements relating to providing a copy of the data, and payment (for large projects only, as noted).

Section A. Data File- A copy of the JCQ job data and selected ancillary data (not all data) is to be provided to the JCQ Center (see address below) after the data has been collected, cleaned, and used for your preliminary analyses. The file should include the following variable scores:

a. Subject ID (and location ID if relevant)
b. All JCQ job content question scores (raw data)
c. Demographic question scores:
   Age; Sex; Education; Marital Status; Occupation-usual occupation (the JCQ User's Guide occupation lists [3 digit] give examples of the detailed occupation coding that should be followed): Industry,
   If collected, the additional information should be included;
   Children (#at home/ ages); Hours of work per week; Income; Race; Previous occupation.
d. JCQ psychological strain scales, if used (and not the dependent variable of the study)

1. Data File Labels:
The data file should have the variables labeled with JCQ Questions numbers for the raw data (ex. q23), and scale labels in Section III of the JCQ Users Guide for demographic variables and any scales constructed.

2. Data Format:
The data should be written on standard 3 1/2" floppy disks under IBM MS-DOS/Windows (state software

version), on IBM tape (state machine and operating system version), or Apple Macintosh OS (state operating system, application program name, file type, and version number).

3. Codebook:
A codebook giving appropriate variable label information and information on each variable (including missing value codes) is to be provided to the JCQ Center with the data file. Enclose a printout of the first three subject records.

4. Translations:
Translations of the JCQ questions into the languages of the site countries, and back translation of the questions into English (approved by R. Karasek) are to be provided to the JCQ Center. These may be distributed by the JCQ Center in the future to other users under the same conditions as the English version.

* Study sizes with data copy requirements:
1. U.S. Canada: 100 subjects or over.
2. Europe, Asia, Other Countries: 250 subjects or over; or studies of single occupations of over 100 subjects.
3. Commercial use, health service (other service use): Contact JCQ Center.

Agreement for JCQ, by Robert Karasek [signature] Date 6/18/03

✓ Agreement by Study Director [signature] Date 09/06/2003

(print) LUNGISWA PATIENCE MAIZE Title MRS

APPENDIX D

APPENDIX D

University of Massachusetts Lowell
UMASS.

One University Avenue, Kitson 200
Lowell, Massachusetts 01854-2867 USA
tel: 978.934.3250
fax: 978.452.5711
web site: http://www.uml.edu/Dept/WE

DEPARTMENT OF WORK ENVIRONMENT

May 13, 2003

Lungi Mkize
University of Natal
School of Nursing
King George Avenue
Durban 4000
Zaire

Dear Ms. Mkize:

Thank you for your interest concerning the "Job Content Instrument: Questionnaire and User's Guide." I hereby send a JCQ Data Base Form and a permission form for use of the questionnaire.

You are required to **complete and return** to us by fax mail the enclosed form entitled "JCQ Data Base Form". Please be as informative as possible in the data you provide on the JCQ Data Base Form and finish at least the top half of the form. We realize study design information (on the bottom half of the form) may be preliminary, but we hope you can turn in at least basic information about your study. This allows us to make you and your project a part of the network of researchers using the questionnaire, presently over 200 research groups.

We also require that you **sign and return** both copies of the enclosed usage contract form (each new use of the JCQ by a researcher requires a new contract form, in order to keep our data base up to date). For the majority of users there is no charge for JCQ use: graduate student projects and small/medium-sized research projects under 750 subjects are free, and research documentation is provided free of charge. However, there are usage fees for large research projects and commercial users- information is provided in the JCQ Usage Policy v. 1.7. Once we receive both copies of the contract we will send back one copy with the JCQ.

We look forward to supplying you with information that may assist you in your research.

You may find more references and information in our book, Robert Karasek and Töres Theorell: Healthy Work, published by Basic Books, 1990 and in the forthcoming reference lists.

Sincerely,

Robert A. Karasek, Professor

Enclosures:
Date Base Form
Contract for Use (2)
JCQ Usage Policy v. 1.7
"JCQ Questionnaire and User's Guide V. 1.7' (without questionnaire)
Karasek, et. al. J Occ Health Psyc. (1998)

Version 1.7 12/1/00

APPENDIX D

APPENDIX D

University of Massachusetts Lowell
UMASS.

One University Avenue, Kitson 200
Lowell, Massachusetts 01854-2867 USA
tel: 978.934.3250
fax: 978.452.5711
web site: http://www.uml.edu/Dept/WE

DEPARTMENT OF WORK ENVIRONMENT

June 17, 2003

Lungo Mkize
University of Natal
School of Nursing
Private Bag X10
Dalbridge 4041
South Africa

Dear Ms. Mkize:

Thank you for your interest concerning the "Job Content Instrument: Questionnaire and User's Guide." We have received your "JCQ Data Base Form" and your signed permission form.

I hereby send our questionnaire and validation report and research literature as requested. We look forward to supplying you with information that may assist in your research.

You may find more references and information in our book, Robert Karasek and Tores Theorell: Healthy Work, published by Basic Books, 1990.

Sincerely,

Robert A. Karasek, Ph.D.
Professor, Work Environment

Enclosures:
JCQ User's Guide and Questionnaire
w/Global Economy and new Psychological Strain Scales
w/Karasek, et al, NIOSH. 1982
Karasek, et al (1983/ U.S., QES 1970's) Validation Report
Karasek and Thorell (1990 Healthy Work, Appendix 1)
Karasek, Schwartz, Theorell. Final NIOSH Report (1982)
Kristenssen (1995) Stress Med.
Kristenssen (1996) J Occ Hlth Psych
Schnall, Landsbergis, Baker (1994) Annual of Pub. Health.
Kawakami (1996), Industrial Health
Karasek (1979), Administrative Science Quarterly

JCQ Database Form(Excel verison)

* Please fill in information as noted for exact section. For assistance, see attached example.

Investigator Information - supply requested information

Principle investigator-First name	Principle investigator-Last name	Affiliation	Address
	✓		
City	State	Country	Post code
E-mail	Fax number	Phone number	
Co-investigator-First name	Co-investigator-Last name	Affiliation	

Study design/population - supply requested information or Yes if applicable

Total sample size	n. Men	n.Women	Cohort study
~~188~~ 177	17	145	
Cross-sectional study	Case-control study	Academic research	Dissertation
YES			MASTERS
Other(purpose of study)	Study Country	Study Region/City	Planned Start Date(MM/YYYY)
Population based	Specific Occupations (list)	Specific company(list the type)	

Are you planning to get the following information? Yes if applicable

Sex	Age	Edu.level	Marital Status
YES	YES	NO	YES
Race	# Children at Home(under six)	Hours work per week	Employment contract status
YES	NO	NO	NO
Rough(1 digit) Occ. code	Detailed(3/4 digits) Occ. codes	Rough Industry code	Social class
REGISTERED NURSES 075			

JCQ scales-comment "full" or "partial"

Please refer to JCQ User's Guide(download on the JCQ website) and indicate which scale you plan to use

Skill Discretion	Decision Authority	Macro Level Decision	Skill Underutilization-1q
Psych Job Demands-6q	Psych. Job Demands-9q	Physical Exertion-1q	Physical Demands-5q

Co Work Soc Sup-4,5q	Superv Social Sup-4,5q	Job insecurity-6q	Job insecurity(Fram.)-3q
JCQ Depression-8q	JCQ Depression-19q	JCQ satisfaction	

Research Category: Yes if applicable

Heart Disease	a. Hypertension	b. Coronary Heart Disease	
Musculoskeletal Disorders	a. Back/Lower Limbs	b. Upper Limbs	
Metabolism-related Disease	a. Diabetes Melitus(Type II)	b. Hyperlipidemia	
General Mental Health	a. Depression	b. Anxiety	c. Burnout
Negative Health Behaviors	a. Smoking	b. Alcoholism	c. Obesity
Accident/Injury	Reproductive system	Immune system	Respiratory system
Cancer	Mortality	Work Organization(e.g., Tea	Technology
Productivity	Active behaviors(e.g., self-esteem, active participation in leisure and politics)		

Study descriptions (less than 200 words)

Description
ABSTRACT

Other Instruments and Suggestions

Other Instruments used	Suggestions to the JCQ Center
Personal Stress Scale	

APPENDIX E

APPENDIX E

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
22 September 2003

The Superintendant General
Deprtment of Health
Natalia
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY IN THE KWAZULU NATAL PUBLIC HOSPITALS

I HEREBY REUQET FOR PERMISSION TO UNDERTAKE A RESEARCH STUDY IN THE PUBLIC HOSPITALS IN KWA ZULU NATAL, UMGUNGUNDLOVU HEALTH DISTRICT.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

NC Majola 22/09/2003

APPENDIX F

APPENDIX F

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
14 October 2003

The Nursing Manager
Edendale Hospital
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT EDENDALE HOSPITAL

I hereby request for permission to carry out a research study in Edendale Hospital. The target population for the study are registered nurses.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

APPENDIX G

APPENDIX G

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
14 October 2003

The Nursing Manager
Fort Napier Hospital
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT FORT NAPIER HOSPITAL

I hereby request for permission to carry out a research study in Fort Napier Hospital. The target population for the study are registered nurses.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

M Majola 14/10/2003

APPENDIX H

APPENDIX H

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
14 October 2003

The Nursing Manager
Greys Hospital
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT GREYS HOSPITAL

I hereby request for permission to carry out a research study in Greys Hospital. The target population for the study are registered nurses.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

N Majola 14/10/2003

APPENDIX I

APPENDIX I

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
14 October 2003

The Nursing Manager
Northdale Hospital
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT NORTHDALE HOSPITAL

I hereby request for permission to carry out a research study in Northdale Hospital. The target population for the study are registered nurses.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

NC Majola 14/10/2003

APPENDIX J

APPENDIX J

P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200
14 October 2003

The Nursing Manager
Townhill Hospital
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY IN TOWNHILL HOSPITAL

I hereby request for permission to carry out a research study in Townhill Hospital. The target population for the study are registered nurses.

I am a part time student at the University of Natal. I am employed at Edendale Nursing College, as a lecturer.

Please find enclosed herein the ethical clearance certificate from the University of Natal.

Thank You

Ntombizakhona Clementine Majola

Majola 14/10/2003

APPENDIX K

APPENDIX K

PROVINCE OF
KWAZULU-NATAL
HEALTH SERVICES

ISIFUNDAZWE
SAKWAZULU-NATALI
EZEMPILO

PROVINSIE
KWAZULU-NATAL
GESONDHEIDDIENSTE

NATALIA
330 LONGMARKETSTREET
PIETERMARITZBURG

TEL. 033-3952111
FAX 033-3952532

Private Bag :X9051
Isikhwama Seposi : Pietermaritzburg
Privaatsak : 3200

REFERENCE : 9/2/3/R
ENQUIRIES : Mr G. Tromp
EXTENSION : 2761

2 9 SEP 2003

P.O. Box 7293
Laager Centre
PIETERMARITZBURG
3200

For Attention: Mrs N.C. Majola

Dear Madam

REQUEST TO CONDUCT RESEARCH

Your letter dated 22 September 2003 refers.

Please be advised that authority is granted for you to conduct a research in the KwaZulu-Natal public hospitals namely Northdale, Grey's, Townhill, Fort Napier, Edendale and King Edward VIII provided that:-

(a) Prior approval is obtained from Heads of relevant Institutions.

(b) Confidentially is maintained;

(c) The Department is acknowledged; and

(d) The Department receives a copy of the report on completion.

Yours sincerely

SUPERINTENDENT-GENERAL
HEAD: DEPARTMENT OF HEALTH
FM/research.majola

APPENDIX L

APPENDIX L

PROVINCE OF KWAZULU NATAL
HEALTH SERVICES

EDENDALE HOSPITAL
TEL: 0333954911
FAX: 033 395 4360

Mrs N.C. Majola
P.O.Box 7293
Laager Centre
PIETERMARITZBURG
3200

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT EDENDALE HOSPITAL

Thank you for your letter dated 14 October 2003 to conduct a research study at Edendale Hospital.

The Institution hereby grants you permission to carry the study out.

Please acknowledge the institution on completion of your study.

M.T. Mvemve
A.D. NURSING

APPENDIX M

APPENDIX M
ovince of KwaZulu-Natal
Health Services

Isifundazwe Sakwazulu-Natal
Ezempilo
FORT NAPIER HOSPITAL

Provinsie KwaZulu-Natal
Gesondheidsdienste

(Midlands Hospital Complex)
P.O. Box 370, Pietermaritzburg, 3200 Tel. No. 033-3454221 Fax No. 033-3455730 e.mail h993765@dohho.kzntl.gov.za

Mrs N.C Majola
P.O.Box 7293
Laager Centre
Pietermaritzburg
3200

APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT FORT NAPIER HOSPITAL

Permission is granted to you to conduct a research study at this institution provided :
The following are adhered to:

1. Confidentiallity.
2. The individual Participants rights respected.
3. A copy of the report received on completion of the report.

M.T Madlala
A.D. Nursing

APPENDIX N

APPENDIX N

PROVINCE OF KWAZULU-NATAL
HEALTH SERVICES

ISIFUNDAZWE SAKWAZULU-NATALI
EZEMPILO

PROVINSIE KWAZULU-NATAL
GESONDHEIDSDIENSTE

GREY'S HOSPITAL

TEL : 033 – 8973000
FAX: 033 - 8973328

PRIVATE BAG X 9001
PIETERMARITZBURG
3200

Enquiries :	Date :	Reference :
Imibuzu :	Usuku : 04 August 2003	Inkomba :
Navrae :	Datum :	Verwysing :

Mrs M Majola
P O Box 7293
Laager Centre
PIETERMARITZBURG
3200

Dear Mrs Majola

RESEARCH ENQUIRY

Thank you for your letter of 24 July 2003.

Please approach Head Office to obtain permission to do research in this (or other) institutions, after which I shall be happy to assist where possible.

Yours faithfully

NURSING MANAGER
For HOSPITAL MANAGER

HIG/nck

APPENDIX O

APPENDIX O NORTHDALE HOSPITAL
OLD GREYTOWN ROAD, P.M. BURG,3200

PROVINCE OF
KWAZULU-NATAL

SIFUNDAZWE

PROVINSIE
KWAZULU-NATAL

Private Bag 9006
PIETERMARITZBURG
3200

Telephone : 033-3879000
Fax : 033-3979768
EMAIL : h981651hl@dohho.kztl.gov.za
Enquiries :Dr M Ramphal
Ext : 9014
2003.11.5

Mrs N C Majola
P O Box 7293
Laager Centre
PIETERMARITZBURG
3201

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR INSTITUTION

Thank you for your letter dated 14 October 2003 requesting permission to conduct your research at Northdale Hospital. We would be grateful if you can make an appointment with Professor M H Cassimjee Chief Specialist in Family Medicine at Northdale to discuss the research and review protocols to ensure that ethical rules are met. Further you will have to sign an indemnity forms. During your stay at Northdale Hospital you would be accountable to the Medical Manager (i.e. myself) and Professor Cassimjee. You must understand that there would be no remuneration and that all rules and regulations in the department will apply to you.

On completion of your research we would require that the Institution be acknowledged.

Thanking you.

DR M RAMPHAL
ACTING MEDICAL MANAGER
NORTHDALE HOSPITAL

APPENDIX P

APPENDIX P

PROVINCE KWAZULU-NATAL HEALTH SERVICES TEL NO : 033-3428741 FAX NO : 033-3455720	ISIFUNDAZWE SEKWAZULU-NATALI EZIMPILO	PROVINSIE KWAZULU-NATAL MIDLANDS HOSPITAL COMPLEX (TOWN HILL) P O BOX 400 PIETERMARITZBURG 3200

Enquiries: Mr M. Pillay

27th October 2003

Mrs N.C Majola(Student Reg. No. 951052588)
P O Box 7293
Laager Centre
PIETERMARITZBURG
3200

Dear Mrs Majola

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY

Your letter dated 14 October 2003 has reference.

Permission is given for you to undertake the above survey.

You are requested to fill in forms from the "Midlands Complex Ethics & Research Committee".

I presently have 105 Registered Nurses at Townhill Hospital.

Mr M. Pillay
ASSISTANT DIRECTOR NURSING

APPENDIX Q

JOB CONTENT QUESTIONNAIRE AND PERCEIVED STRESS SCALE

INSTRUCTIONS

Two questionnaires are included in this mailing. The first questionnaire includes information on your biographical details, as well as questions related to the content of your job with regard to its psychological demands, control and social support.

SECTION A: DEMOGRAPHIC DATA

1. Age:

20 – 25		1
26 – 35		2
36 – 45		3
46 – 55		4
Female		1

56 – 60		5
Male >60		2 6

2. Gender:

3. Population Group:

African		1
Coloured		2
Indian		3
White		4

4. Relationship Status:

Single		1
Married		2
Divorced		3
Separated		4
Widowed		5
Other Explain		6

5. Job Title

NSM		1
CPN		2
SPN		3
PN		4

6. How long have you held this job title?

0 - 2 Yrs		1
3 – 5 Yrs		2
6 – 10 Yrs		3
>10 Yrs		4

7. How long have you been practising as a professional nurse?

0 –2 Yrs		1
3 – 5 Yrs		2
6-10Yrs		3
> 10 Yrs		4

8. Which of the following special care units are you currently working?

Neonatal Unit		1
General Critical Care Unit		2
Step –down Unit		3
Paediatric Unit		4
Burns Unit		5
Acute Psychiatric		6
Intermediate Psychiatric Unit		7
Forensic Psychiatric Unit		8
Renal and Dialysis Unit		9
Other (Explain)		10

SECTION B: Decision Latitude (Skill Discretion and Decision Authority)

For the following questions below please check the box that best represent your response or answer and tick in the box that is closest to your response.

9. My job requires that I learn new things

Strongly Disagree	Disagree	Agree	Strongly Agree

10. My job involves a lot of repetitive work

Strongly Disagree	Disagree	Agree	Strongly Agree

11. My job requires me to be creative

Strongly Disagree	Disagree	Agree	Strongly Agree

12. My job allows me to make a lot of decisions on my own

Strongly Disagree	Disagree	Agree	Strongly Agree

13. My job requires a high level of skill

Strongly Disagree	Disagree	Agree	Strongly Agree

14. On my job I have very little freedom to decide how I do my work

Strongly Disagree	Disagree	Agree	Strongly Agree

15. I get to do a variety of different things on my job

Strongly Disagree	Disagree	Agree	Strongly Agree

16. I have a lot of say about what happens in my job

Strongly Disagree	Disagree	Agree	Strongly Agree

17. I have an opportunity to develop my own special abilities

Strongly Disagree	Disagree	Agree	Strongly Agree

18. I have significant influence over decisions in my work group or unit

Strongly Disagree	Disagree	Agree	Strongly Agree

19. My work group makes decisions democratically

Strongly Disagree	Disagree	Agree	Strongly Agree

20. I supervise other people as part of my job

Strongly Disagree	Disagree	Agree	Strongly Agree

SECTION C: PSYCHOLOGICAL JOB DEMANDS

21. My job requires working fast

Strongly Disagree	Disagree	Agree	Strongly Agree

22. My job requires working very hard

Strongly Disagree	Disagree	Agree	Strongly Agree

23. I am not asked to do an excessive amount of work

Strongly Disagree	Disagree	Agree	Strongly Agree

24. I have enough time to get the job done

Strongly Disagree	Disagree	Agree	Strongly Agree

25. I am free from conflicting demands that others make

Strongly Disagree	Disagree	Agree	Strongly Agree

26. My job requires long periods of concentration on the task

Strongly Disagree	Disagree	Agree	Strongly Agree

27. My tasks are often interrupted before they can be completed, requiring attention at a later time

Strongly Disagree	Disagree	Agree	Strongly Agree

28. My job is very hectic

Strongly Disagree	Disagree	Agree	Strongly Agree

29. Waiting on work from other people or other departments often slows me down on my job

Strongly Disagree	Disagree	Agree	Strongly Agree

SECTION D: SOCIAL SUPPORT

30. My supervisor is concerned about the welfare of those under him

Strongly Disagree	Disagree	Agree	Strongly Agree

31. My supervisor is concerned about the welfare of those under him or her

Strongly Disagree	Disagree	Agree	Strongly Agree

32. My supervisor is helpful in getting the job done

Strongly Disagree	Disagree	Agree	Strongly Agree

33. I am exposed to hostility or conflict from my supervisor

Strongly Disagree	Disagree	Agree	Strongly Agree

34. My supervisor is helpful in getting the job done

Strongly Disagree	Disagree	Agree	Strongly Agree

35. My supervisor is successful in getting people to work together

Strongly Disagree	Disagree	Agree	Strongly Agree

36. People I work with are competent in doing their jobs

Strongly Disagree	Disagree	Agree	Strongly Agree

37. People I work with take a personal interest in me

Strongly Disagree	Disagree	Agree	Strongly Agree

38. I am exposed to hostility and conflict from the people I work with

Strongly Disagree	Disagree	Agree	Strongly Agree

39. People I work with are friendly

Strongly Disagree	Disagree	Agree	Strongly Agree

40. The people I work with encourage each other to work together

Strongly Disagree	Disagree	Agree	Strongly Agree

41. People I work with are helpful in getting the job done

Strongly Disagree	Disagree	Agree	Strongly Disagree

SECTION D: PERCEIVED STRESS SCALE (MODIFIED)

The following questions ask you about your feelings and thoughts during the past month. Although some of the questions are similar, there are differences

between them and you should treat them as separate questions. The best approach is to answer each question fairly quickly. Do not try to count the number of times you felt a particular way but rather indicate the alternative that seems like a reasonable estimate.

1. In the last month, how often have you been upset because of something that happened unexpectedly whilst you were at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

2. In the last month, how often have you felt that you were unable to control the important things in your work life?

Never	Almost Never	Sometimes	Fairly Often	Very Often

3. In the last month, how often have you felt “nervous” and “stressed”?

Never	Almost Never	Sometimes	Fairly Often	Very Often

4. In the last month, how often have you dealt successfully with irritating work hassles?

Never	Almost	Sometimes	Fairly Often	Very Often

	Never			

5. In the last month, how often have you felt confident about your ability to handle your work related problems?

Never	Almost Never	Sometimes	Fairly Often	Very Often

6. In the last month, how often have you found that you could not cope with all things that you had to do at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

7. In the last month, how often have you been able to control irritations in your work life?

Never	Almost Never	Sometimes	Fairly Often	Very Often

8. In the last month, how often have you felt that you were on top of things at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

9. In the last month, how often have you been angered because things that happened at work were outside of your control?

Never	Almost Never	Sometimes	Fairly Often	Very Often

10. In the last month, how often have you found yourself thinking about things that you have to accomplish at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

11. In the last month, how often have you been able to control the way you utilize your time at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

12. In the last month, how often have you felt difficulties at work were piling up so high that you could not overcome them?

Never	Almost Never	Sometimes	Fairly Often	Very Often

13. In the last month, how often you felt that you were effectively coping with important changes that were occurring at work?

Never	Almost Never	Sometimes	Fairly Often	Very Often

14. In the last month, how often you felt that things at work were going your way?

Never	Almost Never	Sometimes	Fairly Often	Very Often