FACTORS UNDERLYING REGISTERED NURSE INTERACTIONS IN A MULTICULTURAL TERTIARY HEALTHCARE PERIOPERATIVE AREA

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DECLARATION

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ABSTRACT

Disruptive behaviour among health care providers in high stress areas such as the perioperative setting has been linked to negative patient safety. Conflicts of power, role and personality lead to communication failure, which are identified as the leading root cause of medication errors and wrong site surgery.

The aim of the study was to explore and describe the factors underlying registered nurse (RN) interactions in a tertiary healthcare perioperative area.

A non-experimental, descriptive, exploratory study with self-administered survey using a quantitative approach was used. The total population of N=52 participants working in the perioperative area of a Middle Eastern tertiary healthcare centre were invited to participate in the study and the response rate was n=44, 85%. A structured self-administered questionnaire was used to collect the data. Reliability and validity was assured by means of a pilot study and consultation with nursing experts and a statistician.

The Health Research Ethics Committee of the University of Stellenbosch approved the study. Permission for the study to be done in the tertiary care centre was obtained from the Internal Ethical Review Board and the Nursing Executive. Informed written consent was obtained from the participants. Anonymity and confidentiality was respected.

The data was analysed with the assistance of a statistician and presented in frequencies, tables and histograms. The responses were compared using Mann-Whitney U test, Kruskal-Wallis ANOVA and Spearman's Rank correlation, on a 95% confidence level. Only one factor showed a significant result, following Spearman's Rank correlation that an association exists between work experience and lateral violence ($p \leq 0.045239$). The open-ended questions were categorized into themes and respect and communication emerged as factors necessary in teamwork and task management

The level of respect and open communication between RNs were seen as important factors for interacting with colleagues in the workplace and if poor, affects team work. An area of concern was the high number of neutral responses to the statements on morale and conflict.

Underpinned by the literature and the outcomes of this study, it is recommended that strong leadership is required to implement regular team building activities. Furthermore, perioperative staff should be monitored for emotional fatigue which results from conflict situations in order to avert adverse patient care events.

OPSOMMING

Steurende gedrag onder gesondheidsorgwerkers in hoë gespanne areas soos in die perioperatiewe omgewing, word gekoppel aan negatiewe pasiënt veiligheid. Konflikte van mag, rol en persoonlikheid lei tot mislukking van kommunikasie wat geïdentifiseer word as die hoofoorsaak van foute by die toediening van medikasie en verkeerde plek vir chirurgie.

Die doel van die studie was om die faktore te ondersoek en te beskryf wat onderliggend is aan geregistreerde verpleeg (GV) interaksies in ’n tersiêre gesondheidsorg perioperatiewe area.

’n Nie-eksperimentele, beskrywende, ondersoekende studie met ’n self-administrerende opname deur ’n kwantitatiewe benadering, was gebruik. Die totale populasie van N=52 deelnemers wat in die perioperatiewe area van ’n Midde-Oosterse tersiêre gesondheidsorgsentrum werk, was uitgenooi om deel te neem aan hierdie studie en die responskoers was n=44, 85%. ’n Gestruktureerde self-administrerende vraelys was gebruik om die data te kollekteer. Betroubaarheid en geldigheid was verseker deur die gebruik van ’n loodsprojek en konsultasie met verpleegdeskundiges, asook ’n statistikus.

Die Gesondheidsnavorsingsetiekkomitee aan die Universiteit van Stellenbosch het die studie goedgekeur. Toestemming vir die uitvoer van die studie by die tersiêre gesondheidssentrum was verkry van die Interne Etiese Oorsigraad en die Uitvoerende Verplegingsbestuur. Ingeligte geskrewe toestemming was verkry van die deelnemers. Anonimiteit en vertroulikheid was gerespekteer.

Die data was geanaliseer met die hulp van ’n statistikus en aangebied in frekwensies, tafels en histogramme. Die response was vergelyk deur van Mann-Whitney U-toets, Kruskal-Wallis ANOVA of Spearman se Rangkorrelasie op ’n 95% vertroulikheidsvlak gebruik te maak. Slegs een faktor het ’n beduidende resultaat getoon, dat daar ’n assosiasie bestaan tussen werkservaring en laterale geweld ($p \leq 0.045239$), deur Spearman se Rangkorrelasie te volg. Die ope-vrae was gekategoriseer in temas. Respek en kommunikasie het as noodsaaklike faktore vir spanwerk en taakbestuur na vore gekom.

Die vlak van respek en ope kommunikasie tussen geregistreerde verpleegsters was gesien as belangrike faktore vir interaksie met kollegas in die werkplek en indien dit swak is, affekteer dit spanwerk. ’n Area van besorgdheid was die hoë aantal neutrale response op die stellings oor moraal en konflik. Ondersteun deur die literatuur en die uitkomste van die

studie, word dit aanbeveel dat sterk leierskap vereis word om gereelde spanbou aktiwiteite te implementeer. Verder behoort perioperatiewe personeel gemonitor te word vir emosionele moegheid wat spruit uit konfliksituasies, ten einde nadelige pasiëntsorg af te weer.

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DEDICATION

In honour of the most excellent God whom I serve. You are the reason for my being.

You continually amaze me with Your grace and mercy, shown towards me who in all ways deserves none of it. Thank You from the depths of my being for Your love, sustenance, patience, and blessing.

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LIST OF ACRONYMS USED IN THE THESIS

ANCC	American Nurses Credentialing Centre
NDNQI	National Database of Nursing Quality Indicators
RPN	Registered Professional Nurse
RN's	Registered Nurses

CHAPTER 1: SCIENTIFIC FOUNDATION OF THE STUDY

1.1 INTRODUCTION

This chapter introduces the scientific basis for the study. Presented in this chapter are the rationale, significance, theoretical framework, problem statement, research aim, and objectives, as well as the methodology and ethical considerations.

1.2 RATIONALE

In the researchers' place of employment, perioperative teams in the culturally diverse organisation have been observed to hinder optimal patient healthcare. The study focused on the Registered Nurse (RN) to Registered Nurse (RN) interactions in the perioperative area, before delivery of healthcare to the patient. As a tertiary healthcare centre in the Western Region of Saudi Arabia, the perioperative area delivers a wide range of surgery, namely; general surgery, neurosurgery, orthopaedics, ear nose and throat (ENT) surgery, vascular, thoracic, urology, ophthalmology, paediatric, cardiac, maxillo-facial and dental surgery. Internal policies and procedures of the hospital had been structured to guide practice and directed all practice in the same way, irrespective of the country of origin.

Workplace dynamics are affected by the intertwining of diversity and organizational behavior builds its own identity (Wilt, 2011:1). Extensive research has taken place on diversity in the workplace with much focus on conflict, but there is a lack of analysis in strategies on face-saving tactics, termed facework, in interpersonal conflict and communication between working groups (Wilt, 2011:2). "Face is an individual's claimed sense of [a] favourable image in the context of social and relational networks" (Zhang, Ting-Hoomey & Oetzel, 2014:373). Facework refers to the behavior that people use to uphold or challenge threats to their honour also termed "saving face".

The contingent of staff in the perioperative area has nursing staff from all over the world. This adds complexity and depth to the social system in the perioperative area. The staff originate from Saudi Arabia, Jordan, India, Philippines, South Africa, Slovakia, Canada and Malaysia. Consistent teamwork is key to the delivery of healthcare that is effective and safe (Paige, Aaron, Yang, Howell & Chauvin, 2009:1182). Healthy working environments enable achievement of the objectives of organisations and personal satisfaction for nursing staff. Communicative, positive and collaborative nurse-to-nurse relationships are essential for achieving healthy work settings (Moore, Leahy, Sublett & Lanig, 2013:172).

To comply with the standards for success in the Magnet Accreditation application, an RN to RN Satisfaction Survey was done in April 2010 and again in October 2011, through the National Database of Nursing Quality Indicators (NDNQI). One of the benefits of Magnet designation is that a collaborative culture is fostered (ANCC Magnet Recognition®, 2012). The outcome indicated that only four of the thirty three units outperformed the median, with the perioperative unit obtaining the lowest score in 2010, with only a marginal improvement in the T-score in 2011, one of the lowest in the hospital. One of the components measured was the RN to RN Interactions, and the score on this component in the perioperative area was among the lowest scoring components in the survey.

The International Council of Nurses, Code of Ethics for Nurses (ICN) highlighted cooperation as an ethical imperative. The duties of the nurse towards co-workers have been explicitly stated, and that the nurse must 'establish and maintain a cooperative relationship with co-workers in nursing and in related fields' (ICN Code of Ethics, 2012:5).

The catalysts for the present study have been a combination of the following;

The outcome of the 2010 and 2011 RN Satisfaction survey in the hospital which showed that the RN to RN interactions in the perioperative environment were amongst the lowest in the hospital

Beheri (2009:223,224) indicates that the exploration of complex interactions within the dynamic of both personal and group situations is needed where interaction among differing nursing co-workers within the modern nursing environment are complicated.

Factors which intervene in the practices within organisations need to be identified, in order to establish if there is an effect on performance (Konrad, Prasad & Pringle, 2006: 69). In addition, diversity has an effect on individuals, which often has an intertwining effect on groups (Konrad *et al*, 2006:60).

Wilt (2011:2) stated that face tactics in communication interaction between different work groups are a ripe source of study as little has been done in this regard. Face tactics within interactions have the unique facility of enabling individuals to create a new identity within the interaction, and become the condition for interacting and not the objective of the interaction (Wilt, 2011:148).

1.3 SIGNIFICANCE

Following the outcomes of the RN Satisfactions Surveys of 2010 and 2011 in the hospital, which were explained in the previous paragraph, the organisation required the perioperative

area to examine interactions in order to find out why the RN to RN interaction T-scores were amongst the lowest in the healthcare centre.

The purpose of collaboration is to improve the quality of health care delivery and is cohesive with the ethical imperative of beneficence so that the patient will benefit. Various factors or competencies are considered important for collaborative working relationships, for example, teamwork, conflict resolution, clearly defined roles, cooperation, collaboration and communication (Engel & Prentice, 2013:427,429). Nursing is principally a relationship with others which requires cooperation, respect for others, as well as their skills, values, knowledge and a desire to interact appropriately to a situation or need (Engel & Prentice, 2013:431).

Teamwork involves coordinating with others so that errors are avoided. Interaction, collaboration, communication, open resolution of conflict, shared decision making and problem-solving are aspects of teamwork. An understanding of these elements is important to effective team membership that can affect the functioning and outcomes of teamwork. Teamwork processes can be improved with the use of quality improvement tools, which will in turn enhance patient outcomes through collaborative interactions (Interprofessional Education Collaborative Expert Panel, 2011:24).

The present study findings will contribute to understanding of interactions between the registered nurses in the context of the perioperative area. The study will highlight which factors in particular have an effect on the interactions, and which factors are considered as important to the RN's within the perioperative area and whether or not interactions have an influence on the execution of tasks.

The insight gained will provide understanding for the implementation of improvement within the perioperative area for focus groups and teams to work cohesively towards improving interaction with each other. The findings will be correlated with the existing policies and procedures which guide current practice in the perioperative area so that cohesive and strategic planned practice improvement can be undertaken.

1.4 PROBLEM STATEMENT

Registered Nurse to Registered Nurse interactions in the multicultural perioperative unit research setting appear to influence internal working relationships. The interaction issue appears to not be satisfactorily resolved before the execution of tasks was required. It has thus become essential that a scientific study is undertaken to determine the underlying factors at the base of registered nurse to registered interactions.

1.5 RESEARCH QUESTION

What are the factors underlying Registered Nurse to Registered Nurse interactions in the perioperative area of a multicultural tertiary healthcare centre?

1.6 RESEARCH AIM

This study aimed to describe the factors underlying Registered Nurse interactions in a multicultural tertiary healthcare perioperative area.

1.7 RESEARCH OBJECTIVES

The objectives of this study were:

- To explore and describe the factors underlying RN to RN interactions.
- To establish if the interactions influence the assigned tasks.

1.8 RESEARCH METHOD

The research methodology applied to this study will be described briefly with further detail described in Chapter 3.

1.8.1 Research design

A non-experimental, descriptive, exploratory, self-administered survey using a quantitative approach was used for this study.

1.8.1.1 Philosophy applied to study

The philosophy applied to the study was post-positivist, with an element of socially constructed knowledge.

1.8.2 Population and sampling

For the purpose of this study, the target population (N=52) included all the registered nurses working in the perioperative area in a Middle Eastern tertiary healthcare centre

1.8.2.1 Inclusion criteria

All registered professional nurses, including managers and clinical coordinators working in the perioperative area, were included in the study.

1.8.3 Instrumentation

A self-administered questionnaire was designed, based on the research objectives, literature and the researchers' clinical experience for the data collection.

1.8.4 Pilot study

The pilot study was conducted amongst 10% (n=5/10%) of the registered nurses in the perioperative area in the tertiary healthcare centre. The research method and the data collection tool were tested for feasibility, precision and clarity, duration for completion, as well as the pertinence of the statements. The data obtained was excluded from the main study. The changes recommended by the pilot participants, were implemented.

1.8.5 Reliability and validity

Reliability means that the measurement instrument will be able to yield results consistently if used by different researchers or used in similar circumstances (Delport, 2005:162-163). The reliability of the content and construction of the questionnaire was tested during the pilot study.

Validity refers to the extent to which the measuring instrument measures the concepts of the research study (Burns & Grove, 2009:43) Content validity refers to the adequacy and relevancy of the variables to the research statement and objectives. The superficial appearance of the data instrument is termed face validity, which in this study was confirmed by the pilot study and also through consultation with experts.

1.8.6 Data collection

Data collection occurred between July 27 and August 21, 2013 in the perioperative area of the tertiary healthcare centre. Consent forms and the questionnaires were supplied with separate blank opaque self-sealing envelopes. Following completion of the consent forms the participants were requested to post them in the dedicated secure box. Another box was provided for the completed questionnaires. A register was kept of the number of consent and questionnaire distributed to ascertain that the number of consent forms and questionnaires were equal.

1.8.7 Data analysis

As the study is a descriptive exploratory study, descriptive analysis was applied. Various statistical tests were applied to determine any statistical associations between variables using a 95% confidence interval.

1.8.8 Ethical considerations

Ethical considerations are focused on the importance of respecting the participants (Gerrish & Lacey, 2010:27), and protecting the human rights of the individual when they take part in a research study (Burns & Grove, 2007:203).

Ethics approval, (reference S12/11/297, Appendix A), was obtained from Stellenbosch University Health Research Ethics Committee. In addition, approval was granted from the Ethics Committee of the institution in which the study was conducted (see Appendix B). Following this, the nursing manager of the perioperative area gave permission for access to the potential participants in the area. The procedures prescribed by the institution for the implementation of this study, were adhered to.

The objectives and nature of the study were explained to all participants, in a general presentation to the unit. An explanation of the study was included on the consent form (see Appendix C). Measures taken by the researcher to guarantee privacy, anonymity, confidentiality, voluntary participation as well as the right to withdraw at any time without penalty, were explained.

1.8.8.1 Informed Consent

The right of an individual to choose and to voluntarily participate in research is referred to as autonomy, and is a primary ethical consideration (Brink, Van der Walt & Van Rensburg, 2006:32). Informed consent, is where the researcher has explained all research study details to the potential participants, after which they give consent to take part in the study (Burns & Grove, 2007:216-217). The researcher was also available for any further explanations before the completion of the written consent. All participants signed the informed consent form prior to answering the questionnaire. Participants took part in the study anonymously; hence no names were affixed to the questionnaires. Upon completion the envelopes were sealed and placed in the post box which was supplied by the researcher.

1.8.8.2 Privacy, anonymity and confidentiality

The right of the participants to anonymity, confidentiality and privacy was assured by not requiring names on the questionnaires, and keeping the consents separate from the questionnaires. Anonymity is assured when the participants are not identifiable (Brink *et al.,* 2006:34).

The researcher protected the confidentiality of the participants by keeping the completed consent forms separate from the questionnaires. Confidentiality is explained by Burns and Grove (2007:212) as being when the responses of the individuals are kept private and only disclosed with their authorisation.

The researcher ensured that all forms were complete, and were verified twice by the researcher and were then then locked away in a secure location to which only the researcher has access. Furthermore, the information provided in the questionnaires has

been restricted to the researcher, the statistician and the researcher's supervisor. The anonymity and privacy of the tertiary healthcare centre in which the study took place has been protected by not disclosing the name of the institution. The raw data and results will be stored in a locked cabinet and saved for five years after completion of the study providing access to the researcher, supervisor and co-supervisor only.

1.8.8.3 Beneficence

Beneficence is described by Muller (2005:67), as the duty of doing or promoting good. The research study will describe the factors present in nursing interactions during the execution of duty. The data thus generated will benefit the institution and in particular the perioperative area in which the study took place.

1.8.8.4 Non-maleficence

The duty of not inflicting harm is described as non-maleficence (Muller, 2005:67). Informed written consent was obtained from all participants, and the participation was voluntary. The right to withdraw from the study at any time, without penalty was emphasised. There were no risks predicted or anticipated for the tertiary healthcare institution, nor the participants in the study.

1.8.9 Limitations

The sample size was small (N=52) as it was limited to the perioperative area. A further limitation is that the study was only done in one hospital. Test-retest for construct validity was not implemented due to time constraints following the protracted involvement of the study settings management, on the acceptability of the contents of the survey tool.

1.9 THEORETICAL FRAMEWORK

King's Conceptual System formed the theoretical framework for the study. The focus of King's theory is on three systems; personal, interpersonal systems, and social where the major concepts are interaction, communication, perception and transaction (George, 2002:249). More detail is described in chapter 2.

King's concepts were adapted for this study, to explore the RN to RN interactions.

1.10 OPERATIONAL DEFINITIONS

Cultural diversity: Booyens (2008:196) explains cultural diversity as being that which includes people who are different from one another, including customs and worldviews.

Culture: Culture is defined in the most idealistic sense by Lovering (2008:14) as being that which best explains and describes a particular group of peoples' values, ideas and beliefs. Culture is defined as a 'complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society' (Tjale & de Villiers, 2004:31). A further explanation is that cultures consist of 'shared ideas, systems of concepts and rules and meanings that underlie and are expressed in the ways that human beings live' (Tjale & de Villiers, 2004:31).

Cultural Competence: Cultural competence is the respect and honour of the different beliefs and interpersonal manners, behaviours and attitudes (Tjale & de Villiers, 2004:34). It is a continuous and dynamic process involving knowledge and skill, and the desire to adapt within the context of a different culture (Almutairi, McCarthy & Gardner, 2014:2).

Face Tactics: Face tactics are explained as the actions of an individual when presenting an image which allows him or herself to be seen in a positive light when presenting an image that the individual wants others to see. It involves protective or defensive behaviour and can be considered either a desire to be part of a group, or separate from it (Wilt, 2011:15,16).

Interaction/s: Interactions are defined as 'the observable behaviours of two or more persons in mutual presence' (George, 2002:246). They are characterised by beliefs, values and methods in order to form and establish relationships. Interactions are further characterised by relationships being commonly experienced, and are influenced by insight and observation, mutual exchanges, interdependence, and communication that is non-verbal as well as verbal (George, 2002:246).

Lateral Violence: Lateral violence, in the context of this study, is nurse-to-nurse aggression. It manifests in different ways such as silent innuendo, verbal insult, infighting, sabotage, activities that are undermining, the withholding of information, disrespect of privacy and breaking of confidences (Embee & White, 2010:167).

Perioperative Nursing: This is the combination of the healthcare of patients preoperatively, intra-operatively and post-operatively, and includes scrub areas as well as those for preparation of instruments (Schewchuk, 2007:19).

Professional Registered Nurse: Is a person registered as a professional nurse, having fulfilled the prerequisites to practice and the prescribed qualifications for registration (South Africa, 2005:6,25,29). In this study, this refers to a professionally trained registered nurse from any country in the world, including those who have trained and obtained registration within Saudi Arabia.

1.11 DURATION OF DATA COLLECTION

The data collection took place over three weeks, from 27th July-21 August 2013.

1.12 CHAPTER OUTLINE

Chapter 1 is the outline of the scientific foundation of the study. This includes a brief overview of the research, the rationale, methodology, theoretical framework, the research aim and objectives.

Chapter 2 presents the literature review which covers a broad view of the existing literature on the subject, as well as the theoretical framework for the study.

Chapter 3 provides a detailed description of the research methodology applied to this research study.

Chapter 4 presents the analysis of data, with the interpretation and the discussion of the results from the study.

Chapter 5 provides the conclusions, recommendations and limitations identified in this study.

1.13 SUMMARY

In Chapter 1, an introduction and rationale to the research study were described. The aim, objectives, research methodology, ethical considerations and conceptual framework for the study was outlined. Operational definitions and theoretical framework were explained, including the data collection and chapter outline of the study.

1.14 CONCLUSION

The perioperative area is a demanding environment and interactions are complicated within that setting, with depth added through the diverse staff contingent. This study was conducted in a perioperative area of a tertiary healthcare centre. The research focused on exploring, and then describing factors underlying RN to RN interactions, before delivery of healthcare to the patient. Cultural diversity is an intrinsic existential element of the perioperative environment, and was not a focus of the study.

Chapter 2 describes the literature that was applied to the study on interactions between nurses and the factors present in interactions.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

A worldwide reality is that healthcare workers move internationally to meet the needs of healthcare (Lovering, 2008:37). According to Wilt (2011:7), when communicating with others, it may be difficult when others are dissimilar to oneself culturally, and that the meanings drawn from such interactions may result in conflict. This becomes evident when the motives and thoughts of the group members personal cultural standards to analyse and decode, or interpret the actions of others are applied. The individual differences of language and culture in a healthcare team may potentially affect the ability to practice safely and competently, which may have an effect on patient outcomes (Almutairi, McCarthy & Gardner, 2014:1).

2.2 LITERATURE REVIEW

Hofstee (2006:91a) explained a literature review as being a broad examination of a subject, that holds significance to the subject being examined. LoBiondo-Wood and Haber (2010:59) say that a literature review has to be a wide-ranging, penetrating and extensive examination of the subject, to establish that there is knowledge of the subject, as well as identifying potential new areas of research. Burns and Grove (2007:135) indicate that a literature review is a cohesive assessment of the 'current theoretical and scientific knowledge' pertaining to the research problem.

The purpose of this literature review was to establish the available literature on nursing interactions before the delivery of healthcare. In the context of this study, literature was examined that was specifically pertinent to RN to RN interactions. Furthermore, the review aimed to elicit the theoretical relevance to RN to RN interactions and to establish if there were any listed factors in literature relating to RN to RN interactions in the delivery of healthcare.

The search engine Google was used to access the databases of Science Direct, Pubmed, Joanna Briggs, Google Scholar and Google Books.

Keywords: Interaction/s; relationship/s; diversity; culture; multicultural; registered nurse; communication; factor/s.

2.2.1 Research paradigms for nurse to nurse interactions

Wilt (2011:iv) examined nursing conflict themes and face-saving tactics in conflict interactions. According to Wilt (2011:3), no study had focused specifically on the effect of conflict in nursing between groups. When healthcare teams work cohesively and harmoniously, there is more satisfaction amongst staff members. The opposite occurs when there is disharmony with a resultant lowering in service standards (Wilt, 2011:3).

An immersive technique was used to research social realities that had been unexplored, within a naturalistic or true-to-life, phenomenological construct model. In this context real-life behaviours were observed within genuine situations. The participants were seen as an integral part of the environment. In this context an individual's actions were compared with other individuals in near identical situations, allowing the experience of the individual to be understood and interpreted. When interpreting the behavior, Wilt explains that Glasser and Strauss' grounded theory approach was applied as an effective tool for examining complexities of human interactions using stories from nurses (Wilt, 2011:49).

Beheri (2009:216-226), examined nurse to nurse interactions in the context of staff turnover and diversity. Adaptations of Cox's Interactional Model of Cultural Diversity and Larkey's Workforce Diversity Questionnaire-II, amongst others, were used with quantitative data analysis. The findings showed that the level of nursing education played a role in openness towards other cultures, and that job satisfaction related to the ability to sustain trusting relationships and accept differences.

Nortje (2012:26,27), used a hermeneutic phenomenological approach, with qualitative interview techniques to explore a multicultural setting in the Middle East, that focused on the experiences and perceptions of a perioperative nursing team. The views of the perioperative nurses perceptions of their relationships and behavior patterns were explored and described. Elements such as teamwork, oppression, abuse, ethnocentrism, gender roles, group dynamics and cohesion were examined. The findings revealed that communication skills positively contribute within a diverse setting, while lack of trust and team cohesion existed (Nortje, 2012:69).

Only one study was found by the researcher that explored nurse-to-nurse relationships. The study used a self-developed questionnaire. It included a Likert scale as well as multiple choice and multiple response statements, in a mixed method research design. Nurse-to-nurse relationships are a key aspect of the work setting, due to the effect that it has on the patients, co-workers, healthcare organisations and the nursing profession. The outcome of

this showed that teamwork, collaboration and communication are vital for safe patient healthcare and outcomes (Moore, Leahy, Sublett & Lanig, 2013:172-179).

Environments which foster respect for others, trust, open face-to-face interactions, skilled communication and collaboration are essential for healthy working environments and are in contrast with the effect of disruptive nurse relationships (Moore *et al.*, 2013:172). Factors which encourage positive nurse-to-nurse relationships include communication and strong leadership (Moore *et al.*, 2013:176). In established and healthy work environments positive nurse-to-nurse relationships result (Moore *et al.*, 2013: 78).

Moore *et al.* (2013:172), further stated that little empirical work has been applied to the issue of nurse-to-nurse relationships although it is important to the work setting.

2.2.2 Theories

'Nursing theories are the creative products of nurses who seek (or sought) to thoughtfully describe the many aspects of nursing in ways that could be evaluated, and used by other nurses' (Sitzman & Eichelberger, 2010:3). They further explain that a theory is the attempt to describe phenomena found in nursing in relationships and patterns.

Hofstee (2006:30) explained theory as a method in which things are described and clarified in order to explain why things are the way they are, and why they happen the way they happen. A theory then becomes a systematic, methodical collection of ideas or concepts, meanings and suggestions which emphasizes how all these are linked to form a cohesive whole. This makes it possible to foresee the outcome about what has been described (LoBiondo-Wood & Haber, 2010:58).

Tjale and de Villiers (2004:21) are of the opinion that in order to fully understand a field of study, the base which underlies it needs to be understood. In the context of healthcare delivered in a multicultural environment, this is especially important so that culture-congruent healthcare may be provided.

A number of theories were examined, namely: the Crescent of Healthcare Model developed in Saudi Aradia by Lovering (Lovering, 2008:1-226), Leininger's Theory of Culture Healthcare Diversity and Universality (Leininger & McFarland, 2006:25), Campinha-Bocote's Model of Cultural Competence (Campinha-Bacote, 2002:181-184), Purnell's Model of Cultural Competence (Purnell, 2002:193-196), and King's Conceptual System (Killeen & King, 2007:51-57).

The theories focus on nurse-patient interactions. However, no specific theory addressing RN interactions before the delivery of healthcare were found by the researcher. Thus in order to provide a framework for looking at RN interaction in a diverse setting, the Kings Conceptual System, was adapted and applied as the theoretical framework for the purpose of this study. The adaptation of King's Conceptual System will be discussed in the next section with a description of the systems within the theory.

2.2.2.1 King's Conceptual System

King presents three interacting systems alongside with some assumptions or notions, which are basic to her conceptual system. These are: personal systems, interpersonal systems, and social systems (George, 2002:244). The three systems are representative of interconnected links for communication in healthcare and nursing (Killeen & King, 2007:52).

2.2.2.1.1. Personal Systems

The personal systems relates to the individual. Each individual is described as a personal system who acts to achieve various goals. King describes the individual as separate from others, with thoughts and feelings, and with the ability to influence others as to who or what he or she is. This also includes beliefs, attitudes, and obligations that separate the individual's inner world from the outer world in which others exist (George, 2002:244-245)

2.2.2.1.2 Interpersonal Systems

King's interpersonal systems which relates to groups, are communication, interaction, role, stress, and transaction, and that various concepts from the personal system are used to understand interactions. Amongst these are interpersonal relationships as a concept of interpersonal systems (George, 2002:244).

According to George (2002:246), King describes interaction as being characterized by methods for forming human relationships, general experience and values, perceptual influence, mutuality, verbal and non-verbal communication, mutual or interdependent and being one where learning occurs when communication is effective. Interaction is defined as the 'observable behaviours of two or more persons in mutual presence' (George 2002:246). The role of the nurse is explained as interaction with one or more people in a nursing situation. The goals of others are identified. The professional nurse uses the nursing skills, values and knowledge congruent with the profession, so that others are assisted in being able to reach their goals (George, 2002:246).

2.2.2.1.3 Social Systems

King's social system is a structured group which includes practices, behaviours and roles which are desirable for the purpose of maintaining the social system, as well as creating ways to sustain the rules and practices of the system. The social system uses the concepts from the personal and interpersonal systems, as well as authority, decision making, power, organization, control and status (George, 2002:247).

2.2.2.1.4 King's Conceptual System Applied

Diverse phenomena have been encountered in the 20th and 21st century according to Killeen and King (2007:52). In nursing practice, a systematic method of organising patient information was developed alongside the development of knowledge for use in practice. These were marked by milestones that were interconnected, which were; the use of a conceptual system and theories, classification systems and nursing informatics (Killeen & King, 2007:52).

The interconnections between these have been paralleled with King's Conceptual System in order to provide a structure for communication and interaction in a world community (Killeen & King, 2007:52).

When developing the Conceptual System, King considered ten concepts, which were; self-role, perception, communication, interaction, transaction, growth and development, stress, personal space, and time (Killeen & King, 2007:53). Killeen and King (2007:54) substantiates that the Conceptual System may be used as a structure in interdisciplinary teams, and in teamwork the maintenance of professional relationships, open communication and respect.

King's Conceptual System emphasises the interaction of each aspect of the system constantly and intricately, and is a framework which empowers nurses to establish effective communication methods as part of healthy interpersonal systems (Shanta & Connolly, 2013:174,175).

In the context of global community and diversity, King's Conceptual System provides a framework within which the communicative interactions of people with religious, cultural and linguistic difference can be understood. In addition a framework is given showing the relationship of many factors in a system that begins with individuals in a specific setting (Killeen & King, 2007:53).

2.2.2.1.5 Linking King's Conceptual System and Nursing Interactions

The conceptual framework is explained by Burns and Grove (2007:167), as the theoretical foundation for a research study founded on observable facts, notions or ideas and viewpoints. The identified concepts adapted for the study from King's Conceptual System are: personal systems, interpersonal systems and social systems. These interrelated systems and concepts define the social and physical environment (Killeen & King, 2007:52).

The reasons for the application of these concepts are:

- Personal systems apply to the individual, and in the context of the study is the professional registered nurse. Within this system, a few notions apply in order for people to understand each other which are perception, personal space and time (Killeen & King, 2007:53).
- Interpersonal systems apply to the perioperative area, within which the RN to RN interactions take place. In this system, individuals related to each other in a different context, either in two's called a dyad, or in three's called a triad, or in small groups, where the complexity of interactions is increased. Within this context, the notions that apply are: interaction, role, communication and transaction (Killeen & King, 2007:53).
- Social systems apply to the hospital in which the study will take place. In this system the organization is a large group within which systems of healthcare, religions and family function are found. The notions that apply within this context are: organisational, authority, decisions and status (Killeen & King, 2007:53).

The interlinking nature of the elements of the model therefore applies to the context of the present study which is to explore and describe RN to RN interactions.

A graphical representation of the identified concepts is presented in paragraph 2.2.7 in figure 2.1 in this chapter.

2.2.3 Worldview

Worldview was included in the literature review as it is relevant to the multicultural settings and a brief explanation follows.

Worldview is a term that is used by anthropologists to explain the manner in which people interact and connect in their world. In the context of healthcare, Western healthcare structures, and those that are based within an indigenous culture, need to be responsive to the cultural context of the client when delivering healthcare (Tjale & de Villiers, 2004:3).

Purnell (2013:10) is of the opinion that within a cultural group there is great diversity, and that major influences form the worldview that people hold as a result of the group that they come from. They form what are called variant characteristics, which is the degree to which they identify with the group of origin.

Some variant characteristics may change, while others will not when exposed to other cultures. An example of this is the immigration status of an individual, which will affect worldview, as a result of spending time away from home (Purnell, 2013:11). Purnell also says that worldview plays a role in the motivation for people to migrate, hoping for a better life, where the worldview will define the expected outcome (Purnell, 2013:18).

Leininger explains worldview as the 'way people tend to look out upon their world to their universe to form a picture or value stance about life or the world around them' (Leininger & McFarland, 2006:15).

In order to survive in life situations, people develop a worldview, and this notion has a double meaning. It embodies the arrangement of ideas and beliefs, which are then related to the symbols and meanings of these beliefs and ideas, which in turn are acted upon. A deduction is then made which suggests that the way people behave is related to their worldview (Tjale & de Villiers, 2006:13)

2.2.4 Ethics

The International Council of Nurses (ICN) Code of Ethics standard for ethical behavior is guided by four main factors. These are; nurses and people, nurses and practice, nurses and profession, and nurses and co-workers. The overriding principle is that nurses are not to be restricted in practice by either the beliefs or culture of those needing healthcare (ICN Code of Ethics, 2012:1-4).

In terms of the interactive ethical requirements, the ICN Code of ethics (2012:3) describes participation within the professional setting as a requirement in nursing to generate a positive practice situation which maintains equal social and economic conditions. Nurses also need to interact and collaborate with their nursing co-workers, as well as interdisciplinary professionals and non-health related workers (ICN Code of Ethics, 2012:4). A collaborative and professional relationship is described as being based on mutually respectful, shared, and co-operative behaviour to reach jointly agreed goals (ICN Code of Ethics, 2012:10).

Substantiated by Muller (2005:67), ethical decision making in nursing is a focused evaluation, both mental and spiritual, which empowers upright action. The action can then be

justified, explained and verified in relation to the principles, duties and responsibilities of the nurse. The four key ethical principles of autonomy, non-maleficence, beneficence, and justice are what regulate ethical choices in the Western world (Lovering, 2008:13).

The Middle Eastern Islamic point of view contrasts with this, as the basics are to preserve faith and guard the sanctity of life, as noted by Lovering (2008:13). Lovering (2008:130-131), is further of the opinion that there are also the shared ethical elements of justice, beneficence and non-maleficence in both the Western and Islamic approaches, where actions and outcomes thereof are the focal point.

In the context of the nurse to nurse relationship, Haag-Heitman and George (2011:15) indicate that there is an important principle to be considered, which is to show respect to positions of authority, to demonstrate appreciation of work done assiduously and responsibly, and to show fine or moral loyalty. Within this context of nurse to nurse relations, the nurse is morally and ethically required to bring to light any serious breach of healthcare that compromises patient outcomes.

2.2.5 Linking Interactions to the Concepts, Worldview and Ethics

The ethical nursing requirement of collaboration was explained in the previous paragraph, which describes that nurses need to interact positively and respectfully. Worldview, as explained earlier in paragraph 2.2.3, has an effect on interactions. Culture, which is both individual and organisational, cultural competence, diversity and interactions within the workplace are discussed below in context of the organization, and as additional concepts within the theoretical, ethical and worldview considerations for the present study.

2.2.5.1 Culture

Culture is defined as a ‘complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society’. A further explanation is that cultures consist of underlying meanings which are expressed through the way people live, sharing ideas, systems, rules and meanings (Tjale & de Villiers, 2006:31). Organisations derive culture from several sources, amongst which are groups within the organization and their experiences, working atmosphere, and verbal communication (Scott, Manion, Davies & Marshall, 2003:7). Organisations are both culture producing and consuming, with organizational culture described as the ‘social or normative glue that holds an organization together’ (Scott *et al.*, 2003:17). Furthermore organizational culture emerges through interaction between differing cultural groups and their assumptions, expectations, attitudes and work practice (Scott *et al.*, 2003:16).

2.2.5.2 Cultural Competence

Purnell (2013:7) explains cultural competence in health healthcare as being able to apply the necessary abilities, and skills that are appropriate to the needs of healthcare, and the ability to detach oneself from one's own culture, values and personal views. There is a progressive transition in moving from lack of awareness of a different culture towards relating to others with awareness.

In the study setting the nurses are not only culturally different to the nursing environment in which they work, but also from each other (Almutairi, McCarthy & Gardner, 2014:1,2). Within the context of a diverse working environment cultural skill is related to skillful interactions with other healthcare professionals so that there is effective and safe healthcare (Almutairi *et al.*, 2014:6).

Cultural competence is a process that is continuous, in which the healthcare provider continuously tries to achieve the ability of being able to work within the cultural context of the situation. Healthcare providers are required to see themselves as 'becoming culturally competent rather than already being culturally competent' (Campinha-Bacote, 2002:181).

The objective of cultural competence is to improve and develop healthcare quality. Differences or disparities need to be minimized within the healthcare context, when there are diverse cultures working together to ensure delivery of quality healthcare (Almutairi *et al.,* 2014:2).

2.2.5.3 Cultural Diversity

Booyens (2008:196) explains cultural diversity as including people who are different from one another, including customs and worldviews, and that all people are included in the diversity, not just minority groups. The two dimensions identified in diversity are primary and secondary. Primary factors are inborn, such as ethnicity, age, gender, which shape perception of self and worldview. Secondary factors are those which may change, and affect a person's worldview and self-perception, such as occupation and salary. In the workplace these factors may influence attitudes.

Diversity has been defined as the 'collective amount of differences among members within a social unit' (Konrad *et al.,* 2006:196). The definition embraces several ideas, amongst which are the actual or perceived variety of differences, as well as the psychological and demographic ones (Konrad *et al.*, 2006:197).

2.2.5.4 Interactions within the workplace

There is a growing number of long-term stays in foreign countries for work purposes, and there are extensive interactions with people who are culturally different (Brislin, 2008: 2). The decision of how to interact with a person from a different culture is often dependent on the cultural norms of the environment for negotiation (Brislin, 2008:9).

According to Krizan, Merrier, Logan, and Williams (2010:26), there is a difference between an individual's worldview and interactions, based on their own cultural background, and the organizational culture. The culture of the organization provides clear guidelines with values and expectations for behavior and practice.

Booyens avers that a challenge for management is the need for multicultural leadership skills (2008:196). The American Academy of Orthopaedic Surgeons (2010:52) stated that cultural diversity needs to be considered as a resource, as it will bring to light the variety of skills, which will benefit the work area, and will encourage a more flexible approach to in general. The realities of diversity in the workplace are increasing globally, with the potential for it to be problematic. Effective, interculturally-competent management practice in the workplace values and uses the strengths that are present in diverse settings (Hill & Dik, 2012:59).

2.2.6 Registered Nurse to Registered Nurse Interaction

According to Searle 'a collegial relationship with doctors and other health professionals is essential' (Searle, 2000:209). In a discussion on nursing interactions, the following statement was made; 'We must approach the implementation of cultural changes from the level of the system in which we have a sphere of influence'. It was pointed out that the organization's Code of Conduct should direct discussion from three perspectives, which includes respect which should be shown to all equally, awareness of how things are said and not what is said, and to always place patient safety first (Gugleimi *et al*., 2011:106-108).

In the Middle East, Beheri (2009:217) studied the effect that cultural diversity had on nurse to nurse interactions. A simplified explanation using a diagrammatic conceptual framework showed that within a culturally diverse setting, interactions are multifaceted (Beheri, 2009:218). The level of education had an effect on cultural group inclusion and exclusion, as well as levels of trust. Higher levels of education and job satisfaction resulted in more trusting relationships in groups that differ, and also had an effect on the ability of nurses to be able to appreciate the cultural differences of others (Beheri, 2009:222).

At the conclusion of a study, Beheri (2009:223-224) noted that there is a need for more research with diverse cultural nursing groups in different organizational situations. Beheri (2009:223) indicated that new instruments need to be developed which are not only specific to diversity in nursing practice but also includes the need to examine and explore the complexities of nursing interactions in conjunction with factors such as conflict, organisational culture and ethics.

Wilt examined nursing interaction in conflict situations. The study focused on interactions, with the use of facework and face tactics in nursing conflict. These tactics play a pivotal role in the ability of individuals to move between conflict tactics such as, collaboration, compromise, avoidance, accommodation and competition. By selecting tactics that differ, there are differing potential levels of engagement, with the result that there is either defense of a stance, or the avoidance of conflict (Wilt, 2011:5).

A study amongst intensive healthcare nurses in Greece, which examined professional interactions amongst nurses, found that the quality of interaction was associated with psychological well-being (Karanikola, Papathanassoglou, Kalafati, Statholpoulou & Mpouzika, 2012:42). Based on the findings of their study, it was said that emphasis needs to be placed on the quality of relationships among nurses. In addition, the recommendation was that potential links between integration and collaboration, and the satisfaction from interactions be considered in the future (Karanikola et al., 2012:42-43). Furthermore, they stated that evidence is lacking on how nurse to nurse interactions affect the quality of healthcare delivery.

2.2.7 Graphical representation of theoretical and conceptual map applied to the study

The map below illustrates the concepts that were identified as the theoretical foundation of the study. The illustration has been adapted from Killeen and King's (2007:53) illustrated description of the model.

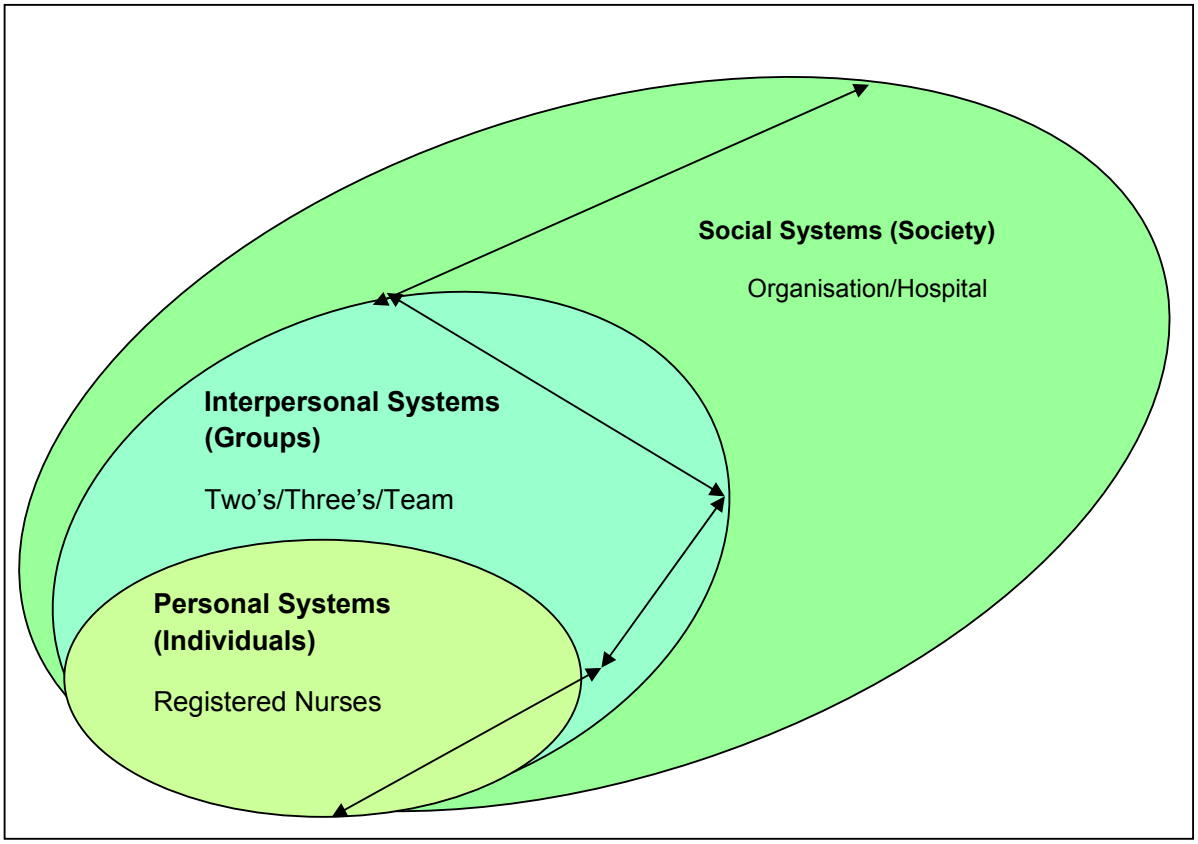

Figure 2.1: Conceptual Map Applied

(Killeen & King, 2007:52)

2.3 SUMMARY

Chapter 2 covered literature reviewed for the purpose of a study that would cover RN to RN interactions. Specific theories on RN to RN interactions before the delivery of healthcare were not found by the researcher. A conceptual model for the study was constructed by the researcher from King's Conceptual System. The concepts were adapted in context with the purpose of the study, for RN to RN interactions in order to provide a contextual foundation for the study.

2.4 CONCLUSION

The literature available on RN to RN interactions with each other before the delivery of healthcare seemed to be limited, which is the focus of the present study.

The literature showed that interactions are multilayered and complex and depth is added within the context of diversity. Furthermore interactions are influenced by worldview and the ethical requirements within nursing, which is to be collaborative.

The gap in the literature noted in particular is theories or models specific to RN to RN interactions, or nurse to nurse interactions.

Chapter 3 will explain the research methodology that was used to explore factors within the context of RN to RN interactions in the perioperative area.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research methodology that was applied to the study, in order to establish which factors are at the base of the interactions between RN's in the perioperative area of the tertiary healthcare center in which the study took place.

3.1.1 Research Question

What are the factors underlying registered nurse interactions in the perioperative area of a multicultural tertiary healthcare centre?

3.1.2 Research Aim

The aim of the study is to describe the factors underlying registered nurse interactions in the perioperative area of a multicultural tertiary healthcare centre.

3.1.3 Research Objectives

The objectives of this study were:

- To explore and describe the factors underlying RN to RN interactions and
- To establish if the interactions influence the assigned tasks.

3.2 RESEARCH DESIGN

Research methodology is explained as the research plan, or the manner in which the researcher has answered the research statements (Babbie & Mouton, 2005:74). Research design as described by Burns and Grove (2007:237) is the outline which guides the planning, execution and control of the research study. In addition to this, it is suggested by Brink, Van der Walt and Van Rensburg (2006:92), that the research design be clearly linked with the research statement and aim.

Quantitative research is a formal, methodical and an unbiased process, which is used to describe fundamental or connecting relationships between elements or factors (Gerrish & Lacey, 2010:134).

A non-experimental approach is different to an experimental approach, in that the research setting remains unchanged and the research takes place as it occurs in the natural setting (Brink *et al.,* 2006:102). When there is not much known about a particular phenomenon, descriptive exploratory studies are appropriate (Sousa, Driessnack & Mendes, 2007:504).

For the purpose of this study a non-experimental, descriptive, exploratory design with a quantitative approach was applied to explore the factors underlying registered nurse interactions in a multicultural tertiary healthcare perioperative area

3.2.1 Philosophical foundation of study

Two main philosophical dimensions exist to distinguish research paradigms, namely epistemology and ontology. Epistemology refers to 'how we come to know what we know' (Killam, 2013:8) and looks at the relationship between the researcher and the knowledge being gained, during the discovery process. Ontology refers to what is already known, and already exists about the reality. In nursing it involves the exploration of the fundamental elements or factors which define the nature of nursing (Fulton, Lyon & Goudreau, 2009:31)

The epistemological and ontological foundation or philosophy of this study is post-positivist with elements of socially constructed knowledge. Socially constructed knowledge occurs through a set of assumptions, and involves relying on participant's views within the context of what is being examined. Open-ended statements are used (Creswell, 2003:8).

A post-positivist view is to conduct quality research, with several considerations within this view. These considerations are; suppression of bias, careful collection of data, accurate reporting of data, and intellectual honesty that is collectively termed axiology (Killam, 2013:35). In addition, the ethical principles of beneficence and respect, which embraces the respect of privacy, and ensures informed consent, are highlighted. There is emphasis on the selection of the best method to answer the statements (Killam, 2013:35). Epistemology in post-positivism values objectivity and encourages rigor, while accepting that the researcher's background knowledge can have an influence on the study (Killam, 2013:37).

Within post-positivism, there is the notion that knowledge exists in a social context and is best understood through interpretive methods of research, and thus tries to get as close to the truth as possible (Killam, 2013:37). Knowledge is shaped by data, evidence and rational considerations. Information is therefore collected by means of a questionnaire (Creswell, 2003:7).

Important in post-positivism are the aims to achieve outcomes, with the intention of reducing ideas into small, distinct ones, which form the research statements. Subsequent to that, the measure of reality, as objectively as possible, follows. Statistical measures of observation are developed, in order to examine the behaviour of individuals (Creswell, 2003:7).

In this context, a post-positivistic approach was applied to a descriptive and exploratory study, within the framework of a quantitative study.

Within the paradigm of study therefore, a more structured approach was used, where a theoretical base was constructed from existing theories, with a self-developed questionnaire based on established data collection

3.3 POPULATION AND SAMPLING

The population is described as being all the individuals considered as suitable for the research that is being done (Burns & Grove, 2009:343). In this study the target population was identified as all the RNs working in the perioperative area of the hospital.

A sample is described as being the actual group used for the study, taken from within the identified population, and that is representative of the group as a whole (Gerrish & Lacey, 2010:144). The process of selection of a representative group of individuals from within that population is called sampling (Burns & Grove, 2007:324). However, in a small population, obtaining a sample is not always possible, in which case it is advisable to use the whole population (Strydom, 2005:195).

Thus for the purpose of this study, the whole population of RNs in the perioperative area (N=52) was used. A statistician, Dr J. Harvey from the Centre for Statistical Consultation at Stellenbosch University, was consulted to confirm the adequacy of the population and it was confirmed as being acceptable.

The cohort of RN's in the perioperative area was multicultural, with staff from Saudi Arabia, Jordan, India, Philippines, South Africa, Slovakia, Canada and Malaysia.

3.3.1 Inclusion criteria

The inclusion criteria for the participants were:

- All Registered Nurses, including managers and clinical co-ordinators working within the perioperative area.
- Current registration with their country of origin, and with the Saudi Commission for Health Specialities.

3.4 INSTRUMENTATION

A self-administered questionnaire was used for data collection (see Appendix E). The questionnaire was designed based on the literature, the research objectives and the researcher's clinical experience. Analysis was performed by an expert statistician.

Selected questionnaire scales were used to guide the development of the questionnaire. These included: Interpersonal Conflict at Work Scale by Spector and Jex (1998:356-357), Rahim Organisational Conflict Inventory-II (Weider-Hatfield, 1988:351), Interaction Involvement Scale of Villaume (1988:22-40), Conflict in Organisations Scale of Lee (2006:51,54, 96-104) and Communication Competence Scale of Weimann (1977:195-213).

In addition, King's Conceptual System (George, 2002:243-251) and Purnell's Model of Cultural Competence (Purnell, 2002:193-196) were used to guide the construction of the questionnaire. King's Conceptual System was applied as the theoretical foundation for the study and was described in Chapter 2.

The questionnaire consisted of three sections:

- Section A: Demographic data.
- Section B: Declarative statements with a five point Likert scale, to establish data on the factors underlying interactions.
- Section C: Two open ended questions to allow the participants the opportunity to provide their opinions on RN interactions.

The five point Likert Scale was used for the responses, ranging from "strongly agree" to "strongly disagree".

Eighteen factors were categorised with an average of four statements for each factor. The factors measured were; Interaction, Conflict, Integrating, Obliging, Dominating, Avoiding, Compromising, Morale, Respect, Perceptions, Attentiveness, Responsiveness, Communication, Culture, Attitude, Lateral Violence, Teamwork and Task Management. The statements were randomly placed within Section B so that responses were not predictable by the respondents for each factor.

3.4.1 Self-developed questionnaire

Questionnaires facilitate the gathering of information in a standardised manner. When an appropriate sample population has been studied, deductions or assumptions can then be made for a wider population. Standardised questionnaires have already undergone exacting, meticulous testing and psychometric analysis in order to test their validity and reliability (Gerrish & Lacey, 2010:369). Researchers in nursing use questionnaires to measure many aspects, some of which are; attitude, emotion, cognition, intention and behavior and knowledge (Gerrish & Lacey, 2010:369).

Considerations that are important when selecting a pre-existing questionnaire are that it will be able to provide the data needed to answer the research statements, as well as will be appropriate for the groups participating. When an appropriate standardised measure is not found to be appropriate, then the development of a questionnaire should be considered (Gerrish & Lacey, 2010:371).

The available standardised questionnaires provided certain aspects of emphasis, for example conflict, interpersonal conflict, communication and aspects of interaction. In order to answer the research question, the researcher designed a questionnaire drawn from the literature. Existing questions or statements were rephrased for the purposes of the study appropriate for the language ability of the respondents in the study setting.

The factors used in the questionnaire were applied as follows within the foundational structure of the study of King's Conceptual System. In addition a further foundational guideline was the ethical requirement in nursing for professional conduct to be mutually respectful, as well as integrative or collaborative. The ethical requirements within nursing were discussed in chapter 2, section 2.2.4.

The Personal System, the Interpersonal System and the Social System were explained in chapter 2, section 2.2.2.1. The factors were applied within these concepts as follows: the Personal System representing the individual contained; Perception, Attitude, Morale, Attentiveness, Responsiveness and Culture. The Interpersonal System representing people in groups of two or three or more, contained; Interaction, Communication, Respect, Teamwork and Task Management. The Social System representing the organisation, contained; Integrating, Compromising, Obliging, Lateral Violence, Conflict, Dominating and Avoiding.

In addition, the factors as components of each system, are not only confined to the system in which they are primarily identified, but there is a fluidity, as they move from one system to another. For example, culture is included in the Personal System and flows into the Interpersonal System, which is then is integrated into the Social System of the organisation. The flow continues back and forth between systems, and is represented in the conceptual map in chapter 2, Figure 2.1.

3.4.1.1 Limitation of the self-administered questionnaire

The limitation of the questionnaire used for this study is that it was developed by a novice researcher. Polit and Beck (2008:380) consider that for a novice researcher to create a new questionnaire that it should be done after careful consideration due to the difficulty of developing a new instrument. Perfect questionnaire design is considered nearly impossible according to Clamp, Gough and Land (2004:218).

The theoretical framework, the literature and the standardised questionnaires provided a good base for objectivity. Killam (2013:37) explained that the researcher's background knowledge can have an influence on the study, which was discussed earlier in the philosophy in paragraph 3.2.1.

Measures to ensure objectivity are; avoiding bias, careful data collection, describing limitations and remaining aware of the ethical principles of research (Killam, 2013:35). The researcher explained the ethical considerations which applied to the study in chapter 1, 1.8.8, which included the principles of informed consent and beneficence.

Objectivity in developing the questionnaire was maintained through use of the frameworks explained earlier in this section, adhering to the research aim and statement together with the ethical principle of beneficence. Additional guidance was provided by the academic nursing experts at the hospital, the statistician and the researcher's supervisor.

3.5 PILOT STUDY

A pilot study is a smaller version of the study being proposed, where data is collected from a representative subgroup of the population. The purpose is to assess the adequacy of the measuring instrument. Feedback from peers as well as from experts in the field is obtained before implementation (Polit & Beck, 2008:67).

A pilot study is a key stage when a questionnaire is developed, allowing evaluation of the instrument to establish whether or not the measure will answer the research statement, meet the objectives and achieve the aim of the study. It is tested for face and content validity. The pilot study consisted of n=5 (10%) of the actual population of N=52.

The questionnaire was pretested in order to test for feasibility, precision and clarity, duration for completion, as well as the pertinence of the statements. The respondents who participated were staff familiar with the perioperative area and it's functioning, but who were not part of the chosen population for the study. They had either resigned, or were familiar with the perioperative area but had been transferred to other departments in the hospital.

These respondents came from New Zealand, South Africa, Canada, Philippines and India, and were at varying levels of professional placement.

Respondents were requested to comment on statement phrasing, use of language in the context of the diverse staff component in the hospital so that all registered nurses participating would understand the statements. In addition they were asked to provide feedback as to whether the intention of the questionnaire was clear.

The results of the pilot study were that the methodology was appropriate for the purpose of this study. The questionnaire was easily understood, the phrasing of the statements was acceptable and the outline and purpose of the questionnaire structure was clear. Minor changes to spelling and language use were made as recommended. Respondents identified that one statement had been duplicated, and as such it was removed from the questionnaire. They reported having found the nature of the questionnaire unthreatening and that it invited their participation and that the time taken on average for the questionnaire to be completed was 15 minutes.

3.6 RELIABILITY AND VALIDITY

3.6.1 Reliability

Reliability is the accuracy or constancy of the instrument used for data collection (Gerrish & Lacey, 2010:531). It will yield results that are constant or consistent, if the instrument is used in circumstances that are similar, or with different researchers (Delport, 2005:162-163).

The pretest of the instrument supported the reliability as the pretest evaluated the clarity, accuracy, and pertinence of statements and duration of completion.

In response to the result, the statistician requested that the phrasing of the variables be cross-checked to ensure that no negatively phrased statements had been coded incorrectly. This was done and there were no changes, as the coding was correct.

3.6.2 Validity

Validity is described as the degree to which the instrument used to measure the intended concepts, actually does so, without bias or distortion (Gerrish & Lacey, 2010:24). Validity therefore measures what is intended in the research (Burns & Grove, 2009:43). The two aspects of validity for this research study were content and face validity

3.6.2.1 Content validity

Content validity is explained as the assessment by experts to establish whether the questionnaire items fully represent the construct, or concept, that is to be measured. It is considered a useful point at which to begin (Gerrish & Lacey, 2010:372).

Acquiescent response bias is the inclination of respondents to respond to all items in the same way. It can be avoided by positively and negatively wording statements (Gerrish & Lacey, 2010:373).

In the questionnaire, acquiescent response bias was avoided by phrasing statements in the same way. In addition to this, the statements pertaining to the specific factors were not grouped together, but randomly placed.

The questionnaire had been developed from constructs that had been identified from a detailed literature review, the identified theoretical framework of the study, the research objectives, and the researcher's clinical experience. In addition, nursing experts, one with a PhD in nursing within the research department of the hospital, were consulted with regards to the construction of the questionnaire, the phrasing of the statements which provided overall insight into the methodology for the study. The drafts of the questionnaire were reviewed by the researcher's supervisor and the nursing experts from the hospital. Additional discussions were held with members of the ethical review board who provided further insight and recommendations which directed the study.

3.6.2.2 Face validity

The superficial appearance of the measuring instrument is called face validity (Delport, 2005.161). It is a subjective appraisal to ensure that the items in the instrument appear unambiguous and clear (Gerrish & Lacey, 2010:372). Delport (2005:161) avers that face validity is the least scientific measure of validity, which potentially affects the completion of the questionnaire.

In this study, face validity was ensured through consultation with nursing experts in the research centre of the hospital, the researcher's supervisor, and established with the feedback from the instrument pretest.

3.7 DATA COLLECTION

The data collection period took place over a period of three weeks from 27 July to 21 August 2013. Data was collected from within the perioperative area of the healthcare centre where the study took place. The number of questionnaires delivered and received was recorded.

The researcher collected the completed questionnaires and consents at the end of the research period. The response rate was 45 (n=45) of the total population of (N=52). There was one spoiled paper establishing the response rate at 44 (n=44), which was calculated at 85%.

The research study reasons, nature and objectives were explained collectively to the perioperative team within the study setting. The questionnaires together with the consent forms were handed to the participants with a separate opaque envelope for each. The questionnaire and consent were each numbered in pairs, for the purpose of being able to verify that for each completed questionnaire, there was a completed consent. No attempt was made to identify the participants.

When completed, the respondents sealed the questionnaires and consents in separate opaque and blank envelopes that had been supplied, and thirty eight (n=38/85%) of the respondents used the provided boxes. Seven (n=7/15 %) questionnaires were handed to a clinical coordinator, and subsequently given to the researcher at the time of collection.

3.8 DATA ANALYSIS

Data analysis is described as the manner in which the primary data are organised, communicated, or presented after analysis, so that the end results are meaningful (Brink *et al.,* 2006:170).

Descriptive analysis was applied to the study, which is appropriate for a descriptive exploratory study. The statistician, Dr J. Harvey was consulted for the analysis of the data.

The researcher used an Excel® spreadsheet for the tabulation of data and the details and data entry were cross-checked. The data were then analysed by the statistician using Statistica 12®.

Statistical techniques are used to establish the implications or connections which can be made which may relate to a wider population (Gerrish & Lacey, 2010:318).

Descriptive and inferential analysis was applied for this research study. The descriptive analysis applied, were means and standard deviations for the continuous data, which were, age, and experience since qualifying. Mean is explained by Gerrish and Lacey (2010:530) as the mathematical average of all the scores in the survey. The mean or average is the most useful measure of a central set of data, or central tendency (Gerrish & Lacey, 2010:447). Standard deviation is a measure of variation from the mean, or the spread of sample data

(Gerrish & Lacey, 2010:532). It is the measure of dispersion from the mean (Brink *et al.,* 2006:178).

Frequency tables with counts and percentages were applied for the remaining variables such as gender and qualifications. Histograms and frequency tables were used to represent the descriptive statistics.

The non-parametric tests applied in this study to determine any associations were the Mann-Whitney U Test, and Kruskal-Wallis ANOVA tests. The Mann-Whitney U test compared interaction, teamwork and task management statements with the qualifications namely a degree, diploma or both. The Kruskall-Wallis ANOVA was applied to compare the responses to age and qualifications.

Spearman's Rank Correlation was used to test the direct association between two variables, which were age and experience since qualifying with the factors.

The outcome is represented as a p-value, with a ninety five percent confidence level for the Mann-Whitney U test, Kruskall-Wallis ANOVA and the Spearman's Rank Correlation.

3.9 SUMMARY

This chapter explained the methodology used for the research, including the design, population, pretest, instrumentation, reliability and validity. In addition, the process of data collection and the methods of analysis were described. In order to collect the data a self-administered questionnaire was used. The total population consisted of registered nurses in the perioperative area. The research design is a non-experimental, descriptive exploratory with a quantitative approach. Descriptive statistics will be used for the analysis of the data.

3.10 CONCLUSION

Chapter 3 described the methodology which applied to the research study. Chapter 4 will detail the analysis of the data and the interpretation of the findings in the research study.

CHAPTER 4: DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 INTRODUCTION

This chapter outlines the analysis and interprets the data that was collected. Analysis of data is described by Brink *et al.,* (2006:170), as the manner in which data is arranged, organised and then described, in order to provide results that are significant or meaningful.

4.2 DATA ANALYSIS

According to Gerrish and Lacey (2010:23), the most vital or central phase of any research study is the data analysis. With data having been collected, the information needs to be arranged or organised, so that conclusions or deductions, can be made. Analysis enables the distribution or dissemination of data, which otherwise would not make sense on a spreadsheet. Statistical analysis is explained as the most applicable for quantitative data (Gerrish & Lacey, 2010:23).

Following the capturing of the data, the completed spreadsheet was submitted to a qualified statistician, Dr J. Harvey, for analysis. The data was analysed with the STATISTICA 12® program. Descriptive and inferential statistical methods were applied to the data.

4.2.1 Data preparation

The questionnaire contained three sections:

- Section A: Demographic and professional profile
- Section B: Declarative statements with a 5 point Likert Scale.
- Section C: Open-ended questions

An Excel spreadsheet was used for notation of the raw data and each questionnaire was numbered. Thus, each row represented a respondent. The columns represented the responses for the demographic and professional data and for each Likert scale response to the statements. The responses were personally entered onto the spreadsheet by the researcher, and then cross-checked to ensure that the information had been accurately transcribed.

The open-ended statements were separately analysed by the researcher and tabulated, using an Excel spreadsheet. The main themes were identified. The purpose of the open-

ended statements was to afford the respondents the opportunity to write their personal opinions.

4.2.2 Descriptive statistics

Descriptive statistical analysis is the term given to data that is analysed, described and summarised (Sullivan-Bolyai & Bova, 2010:310). It enables the researcher to draw conclusions about the population from the analysis, and to then paint a picture representing the outcomes from the sample (Houser, 2014: 309).

The inherent data is presented in a meaningful, structured manner and the methods used for presenting descriptive data are means and standard deviation for the continuous data. Frequency distributions, describe the central tendency, for the categorical and ordinal data. The mean is the measure of central tendency, which is the calculated statistical average of all the scores (Brink *et al.,* 2006:177). Standard deviation is explained by Brink *et al.* (2006:178), as the variability in scores that relates to the mean.

The analysed data are presented in frequency tables, graphs and histograms.

4.2.3 Inferential statistics

Inferential statistics should represent the sample population, allowing for generalisations to be made from that population (Burns & Grove, 2007:408). In non-experimental research, there is no manipulation of the independent variables. In the context of the variables, the relationship between the variables can be established (McBurney & White, 2009:220). The findings from the analysis are applied to the sample population, thus allowing the researcher to infer which findings could be applied to a wider population (Burns & Grove, 2007:408).

The nominal variables in this study were of the factors as groups, and no particular order was applied to the analysis. Tables and histograms were used to graphically present the outcomes.

In medical research it is accepted that if the p-value ≥ 0.05, then the difference between the variables tested is insignificant. When the p-value is less than p≤ 0.05, the difference between the variables is statistically significant. A confidence interval of 95% is usually used in medical research (Attia, 2005:78-79). A p-value greater than 5% (p ≥ 0.05), will show a difference between the variables that is insignificant. The p-value therefore indicates whether or not the result is statistically significant (Gerrish & Lacey, 2010: 458).

Therefore, for the purposes of this study a confidence interval of 95% with a significance level of p≤ 0.05 was used to show differences between variables that are statistically significant.

The Mann-Whitney U test requires that all elements are analysed as if they are from a single sample, and the statistic U, is calculated from this and represented as p-value (Gerrish & Lacey, 2010:462). The outcome with p-value ≤ 0.05 is considered statistically significant. The test compared the factors interaction, teamwork and task management statements with the qualifications namely a degree, diploma or both.

Kruskal-Wallis ANOVA is a non-parametric test that is used when the differences between two or more groups are compared (Burns & Grove, 2007:430). The outcome is indicated by a p-value (Gerrish & Lacey, 2010:463). Kruskal-Wallis ANOVA test was applied to compare age and qualifications, and an outcome with a with p-value ≤ 0.05 being statistically significant

Spearman's Rank Correlation is a test to measure the direct association between two variables, and establishes the extent to which a difference between one variable is related to the difference in another (Gerrish & Lacey, 2010:528). The test compared the factors with age and experience since qualifying. An outcome with a p-value ≤ 0.05 is statistically significant.

4.3 QUESTIONNAIRE RESPONSE RATE

There were 52 respondents (N=52) in the total population. Forty-five (n=45/87%) questionnaires were returned. Burns and Grove (2007:403) state that incomplete questionnaires should be excluded. One paper was considered spoiled as it had not been fully completed, and was excluded. Therefore, the response rate was established at 44 (n=44/85%).

The response rate is calculated by taking the number of responses and dividing this by the total number of respondents (Brink *et al.,* 2006:177). Therefore, (n=44) was divided by (N=52) to establish a response rate of 84.6%, which was rounded to 85%. The response rate is considered acceptable for a questionnaire that is self-administered and which was enhanced by face-to-face delivery by the researcher (Delport, 2005:168).

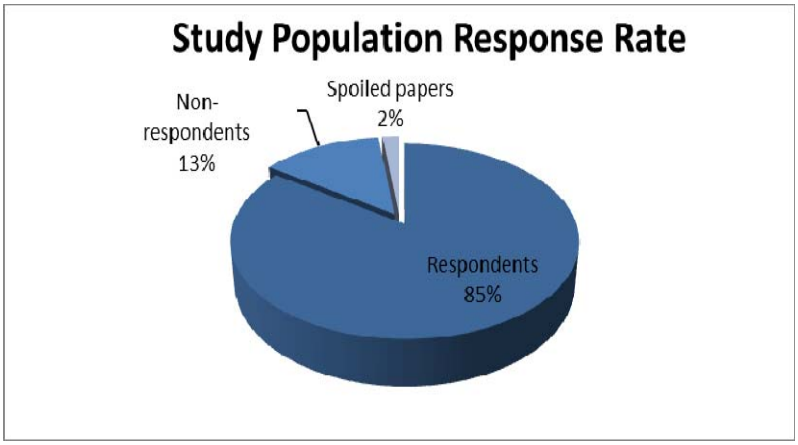

Figure 4.1: Pie Chart Showing Response Rate of Study Respondents

4.4 SECTION A: DEMOGRAPHIC PROFILE

This section required the respondents to indicate their demographic profile with respect to the following; gender, age, country of origin, country of registration, experience since qualifying, basic qualification either degree or diploma, post-basic qualifications and post-basic certification or diploma in operating room technique or scrubbing.

4.4.1 Gender (n=44/100%)

Table 4.1 shows that the majority of respondents (n=38/87%) were female. Apart from one participant (n=1/2%), who did not indicate gender, the remaining respondents (n=5/11%) were male.

Table 4.1: Gender of respondents

Gender	n	%
Female	38	87
Male	5	11
Missing response	1	2
TOTAL	**44**	**100**

4.4.2 Age in years (n=44/100%)

The mean age was 37 with a standard deviation of 8.40 years. Figure 4.2 shows the ages of the respondents were grouped into categories; 20-29; 30-39; 40-49 and 50-59 years. The majority of the respondents (n=17/39%) were in the 30-39 age group.

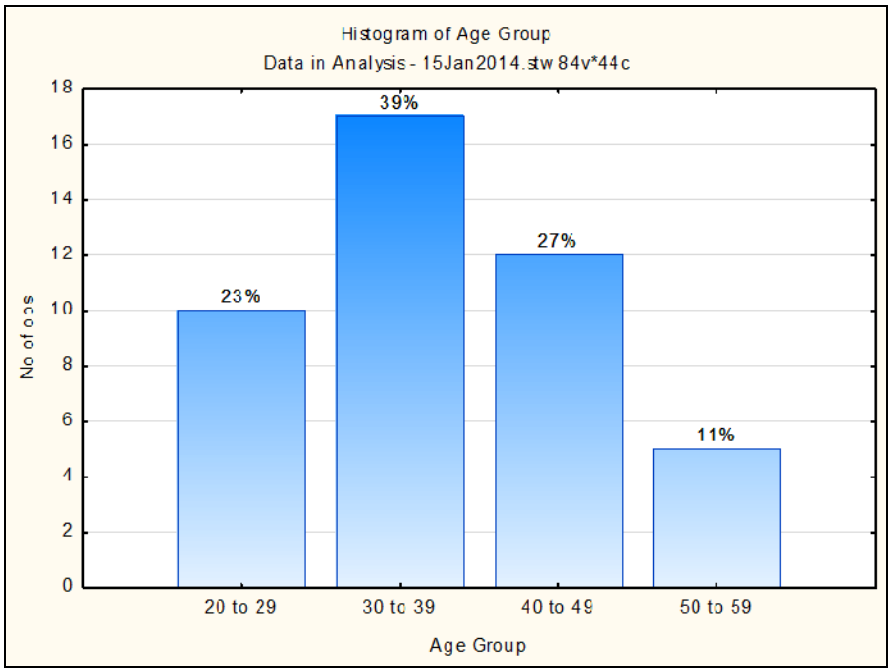

Figure 4.2: Age distribution of respondents

4.4.3 Country of origin (n=44/100%)

Figure 4.3 shows the range of the respondents in this study originated from eight different countries. The majority of respondents came from the Philippines (n=12/27%). The lowest number of respondents came from Canada (n=1/2%) and Slovakia (n=1/2%).

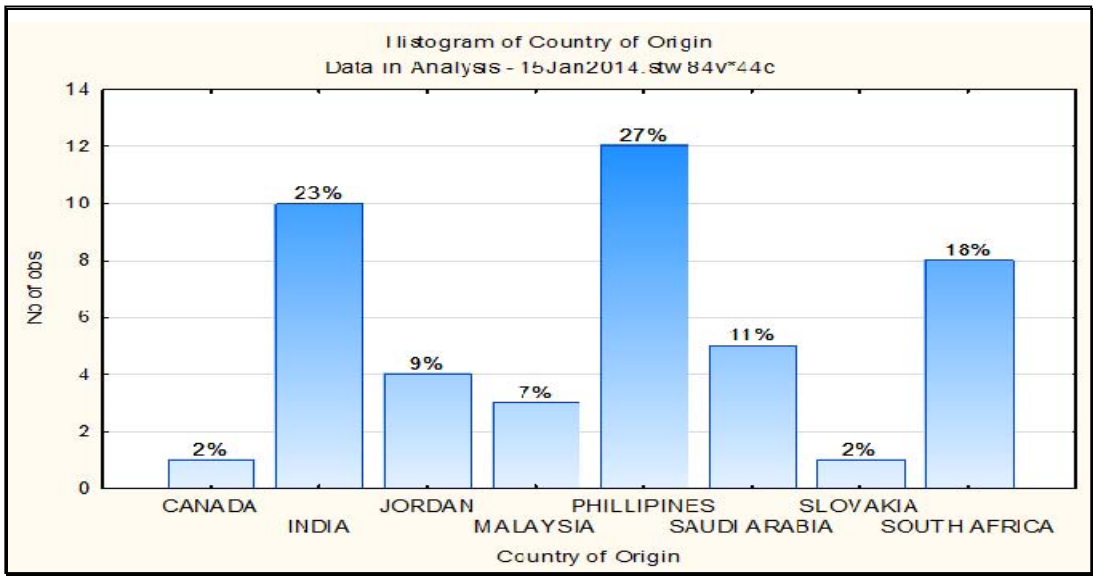

Figure 4.3: Country of origin

4.4.4 Country of registration (n=44/100%)

Figure 4.4 shows that the respondents in the research study were registered in ten different countries. This differed slightly from the number of countries of origin of the respondents, with only two respondents registered in countries different to their origin. The majority of respondents registered came from the Philippines (n=11/25%).

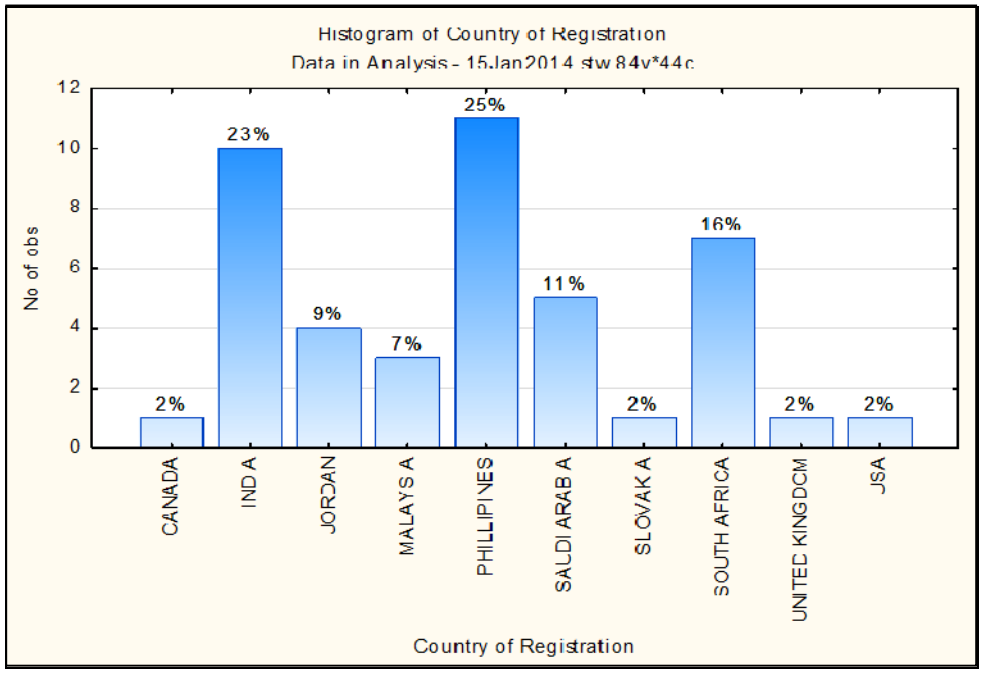

Figure 4.4: Country of registration

4.4.5 Experience in years since qualifying (n=44/100%)

Figure 4.5 shows the experience in years since qualifying. The mean years of experience since qualifying was calculated at 15 years, with a standard deviation of 9.38 years, and a median of 12.5 years. The most experience gained since qualifying was 35 years, and the least, 2 years.

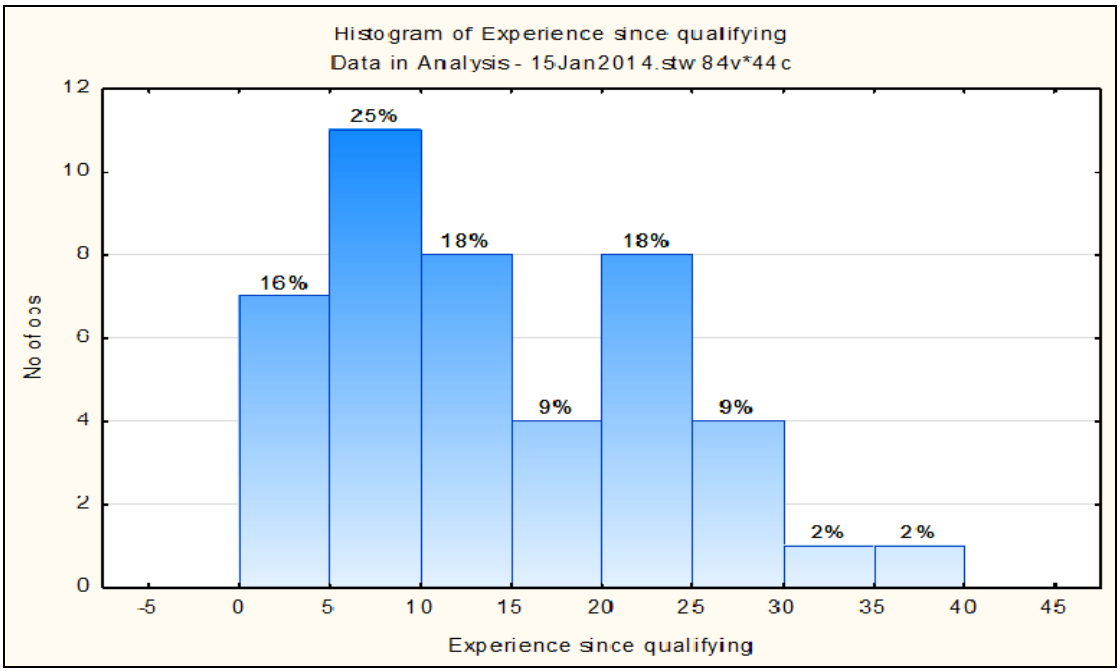

Figure 4.5: Experience in years since qualifying

4.4.6 Basic nursing qualification – degree/diploma (n=44/100%)

Table 4.2 shows the number of respondents (n=22/50%) with a degree as a basic nursing qualification. There are (n=19/43%) with a diploma as a basic qualification and (n=3/7%) have both a degree and diploma.

Table 4.2: Basic nursing qualification

Basic nursing qualification	N	%
Degree	22	50
Diploma	19	43
Degree and diploma	3	7
TOTAL	**44**	**100**

4.4.7 Post-basic qualification in Operating Room Nursing (n=44/100%)

Table 4.3 shows that few respondents (n=15/34%) have a post-basic qualification in operating room nursing. The majority of the respondents (n=29/66%) do not have a post-basic qualification specific to operating room nursing.

Table 4.3: Post-basic qualification in OR nursing

Qualification in OR nursing	N	%
No	29	66
Yes	15	34
TOTAL	**44**	**100**

4.5 SECTION B: QUESTIONNAIRE

Section B consisted of statements relating to the following factors: Interactions, Conflict, Integrating, Obliging, Dominating, Compromising, Avoiding, Morale, Respect, Perceptions, Attentiveness and Management. The statements pertaining to each factor were placed randomly throughout the section within the document and for analysis were placed within the appropriate factor group.

When describing the outcomes of the analysis, tables are used to represent the responses. The statements are described in groups that pertain to the factors. The numbers as reported have been rounded either up or down to the nearest decimal point. The strongly agree and agree, and strongly disagree and disagree components were collapsed to agree and disagree respectively. Frequency tables represent the responses to the total outcomes of the factor analyses. Each factor is included in the description, as the study's purpose is to describe and explore the factors that underlie interactions.

The participants had the opportunity to respond to the statements with a neutral option. According to Gerrish and Lacey (2010:376) if there is no option of neutral on a Likert Scale it may cause confusion or irritation, especially if the respondent has no opinion about a statement. At the same time the neutral option may increase the possibility of there being non-response bias. In addition, perioperative personnel may think that there will be no effect or change for them by giving feedback, and may feel that they are unable to contribute to new knowledge with their input (Chipps, Stelmaschuk, Albert, Bernhard & Holloman, 2013:490,491). Moreover, the fear of retribution in the workplace should the respondents choice become known, could be the reason for the high percentage of neutral responses in this study.

4.5.1 Interactions

Statement 8: I understand interactions with my nursing colleagues to be the way in which we work together as a team (n=44/100%)

Table 4.4 shows that the majority of the respondents (n=41/94%) agreed that they understood that working in a team is interactive. There was one (n=1/2%) neutral response and two (n=2/4%) missing responses.

Statement 19: Interactions with my nursing colleagues are the way in which we affect each other (n=44/100%)

The majority (n=35/80%) agreed that interactions are the manner in which colleagues affect each other. There were nine (n=9/20%) neutral responses to this statement (Table 4.4).

Statement 42: I understand interactions with my nursing colleagues to be the way in which we communicate with each other (n=44/100%)

Table 4.4 shows that the majority (n=43/98%) agreed that interactions involved communication with colleagues. There was one (n=1/2%) neutral response to this statement.

Statement 54: I understand interactions with my nursing colleagues to be how I behave when I am in the company of my nursing colleagues (n=44/100%)

The majority of the respondents (n=36/82%) agreed that their behaviour was an aspect of interaction. There were eight (n=8/18%) neutral responses to this statement (Table 4.4). There were no responses to the options for “disagree” for this section, and were therefore not reflected in the analysis. They are excluded from the table below.

It can be deduced from the responses to interactions that the majority of the respondents understood that communication is an aspect of interactions, as well as behavior, teamwork and the effect on others.

Kruskall-Wallis testing showed no significant results were obtained between specific qualifications and interactions.

Table 4.4: Responses to statements on Interactions

		Agree		Neutral		Missing	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
8	I understand interactions with my nursing colleagues to be the way in which we work together as a team	41	94	1	2	2	4
19	Interactions with my nursing colleagues are the way in which we affect each other	35	80	9	20		
42	I understand interactions with my nursing colleagues to be the way in which we communicate with each other	43	98	1	2		
54	I understand interactions with my nursing colleagues to be how I behave when I am in the company of my nursing colleagues	36	82	8	18		

4.5.2 Conflict

Statement 24: My nursing colleagues sometimes argue with me (n=44/100%).

Table 4.5 shows that half (n=22/50%) agree that their colleagues argue with them. Nine (n=9/20%) disagreed and (n=13/30%) remained neutral.

Statement 35: I sometimes argue with my nursing colleagues (n=44/100%).

The majority of the respondents (n=24/54%) responded that they sometimes argued with their colleagues. Seven (n=7/16%) indicated that they disagreed with the statements and (n=13/30%) remained neutral (Table 4.5).

Statement 57: I am sometimes rude to my nursing colleagues (n=44/100%).

Table 4.5 shows that sixty six percent (n=29/66%) of the respondents did not agree that that they are rude to their colleagues at times. Thirty two percent (n=14/32%) remained neutral and a minority (n=1/2%) agreed that they are sometimes rude to their colleagues.

Statement 73: My colleagues are sometimes rude to me (n=44/100%).

Seventeen respondents (n=17/39%) disagreed that their colleagues are rude to them at times and sixteen (n=16/36%) agreed with the same statements. There were (n=11/25%) neutral responses to this statements (Table 4.5).

The responses to this section showed neutral responses to each of the statements with the average percentage determined by the researcher at twenty nine percent (29%), which may

be considered to be possible non-response bias. In addition, the responses to statements 24 and 29 contrast with one another, as well as statements 35 and 57.

The reason for the varying responses can be explained that inherent attitudes will influence the objectivity and accuracy of response of the respondents regarding their own and the behavior of others. This is alongside self-image, how others are seen and the current status within the working environment (Al-Hamdan et al, 2011:578).

Table 4.5: Responses to statements on Conflict

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
24	My nursing colleagues sometimes argue with me.	22	50	13	30	9	20
35	I sometimes argue with my nursing colleagues.	24	54	13	30	7	16
57	I am sometimes rude to my nursing colleagues.	1	2	14	32	29	66
73	My nursing colleagues are sometimes rude to me.	16	36	11	25	17	39

4.5.3 Integrating

Statement 26: When an issue needs to be resolved I work with my nursing colleagues to find an answer (n=44/100%)

Table 4.6 shows that in response to this statement, the majority (n=37/84%) agreed that they worked with their colleagues to find a solution to issues. One (n=1/2%) respondent disagreed with the statement and Six (n=6/14%) remained neutral.

Statement 39: If a solution is reached or a decision is made that I don't agree with, I still follow the solution or decision that has been made (n=44/100%).

Fifty-three percent (n=23/53%) of the respondents agreed that they cooperate with the solution or decisions that are made even if they do not concur. Two (n=2/4%) disagreed. It was noted that (n=19/43%) remained neutral in response to this statement (Table 4.6).

Statement 45: I am honest and open with information when there are problems that need solving (n=44/100%).

Table 4.6 shows that (n=43/98%) agreed that that they are honest and open when problems needed solving.

Statement 63: I enjoy integrating and collaborating with my nursing colleagues to make decisions that are satisfactory to all of us (n=44/100%).

The majority (n=37/84%) of the respondents agreed that they enjoyed integration and collaboration for satisfactory solutions. There were six (n=6/14%) neutral responses and one (n=1/2%) missing response to this statement (Table 4.6).

For statements 26, 45 and 68, it is encouraging to note that the majority of the respondents prefer integrating with their colleagues to resolve issues. Integration is explained as a strategy that involves thinking critically and applying clinical and scientific knowledge in situations that include relational, interpersonal and collaborative aspects (Gantz, 2009:82).

However, the 43% neutral response to statement 39 suggests that there is a problem or an inadequacy in integration following a disagreeable decision. Integration requires one person working with others in an integrative or collaborative way so that a satisfactory solution is reached for two people or a group (Al-Hamdan *et al.,* 2011:572).

Table 4.6: Responses to statements on Integrating

		Agree		Neutral		Disagree		Missing	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
26	When an issue needs to be resolved I work with my nursing colleagues to find an answer.	37	84	6	14	1	2		
39	If a solution is reached or a decision is made that I don't agree with, I still follow the solution or decision that has been made.	23	53	19	43	2	4		
45	I am honest and open with information when there are problems that need solving.	43	98	1	2	0	0		
63	I enjoy integrating and collaborating with my nursing colleagues to make decisions that are satisfactory to all of us.	37	84	6	14	0	0	1	2

4.5.4 Obliging

Statement 10: I often give in to the needs and requests of my nursing colleagues (n=44/100%).

Most of the respondents (n=33/76%) agreed that they often concede to the requests of their colleagues (Table 4.7). Two (n=2/4%) disagreed with the statement and there were (n=9/20%) neutral responses.

Statement 52: I often do more than I need to, so that I can show consideration towards my nursing colleagues to ease their general workload (n=44/100%).
In table 4.7 (n=26/59%) agreed that they will do more than they need to so that they can show consideration for their colleagues. Three respondents (n=3/7%) disagreed with the statement. It was noted that (n=15/34%) remained neutral in response.

Statement 58: I adapt to the needs and requests of my nursing colleagues (n=44/100%).
The majority (n=32/73%) of the respondents agreed that they adapt to the requests and needs of their colleagues. Eleven (n=11/25%) respondents remained neutral. There was one (n=1/2%) missing response to this statement (Table 4.7)

Statement 76: I attempt to get along with my nursing colleagues and try to please them (n=44/100%).
Fifty-seven percent of the respondents (n=25/57%) indicated that they will try to get along with their colleagues and try to please them. Five (n=6/11%) disagreed. It was noted that there were (n=13/30%) neutral responses (Table 4.7)

The average neutral response for this factor is 27%, as each of the statements had neutral responses. This may be attributed to non-response bias, as previously explained.

Furthermore, the majority of the respondents consider themselves to be obliging, which is in contrast to the high number of neutral responses. Obliging can be explained as cooperative or co-operating (Gantz, 2009:92) and comes from a high concern for others, less concern for own interests and is characterized by unassertive but cooperative behavior (Al-Hamdan *et al.*, 2011:572).

Table 4.7: Responses to statements on Obliging

		Agree		Neutral		Disagree		Missing	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
10	I often give in to the needs and requests of my nursing colleagues.	33	76	9	20	2	4		
52	I often do more than I need to, so that I can show consideration towards my nursing colleagues to ease their general workload	26	59	15	34	3	7		
58	I adapt to the needs and requests of my nursing colleagues	32	73	11	25	0	0	1	2
76	I attempt to get along with my nursing colleagues and try to please them	25	57	13	30	6	11		

4.5.5 Dominating

Statement 18: If a decision is made that I don't like, I won't say so outwardly, but will not do what is required , or participate in the actions (n=44/100%).

In Table 4.8 almost half (n=21/48%) of the respondents disagreed that that they would not participate in activity or do what is required if they did not agree with a decision that had been made. Eleven (n=11/25%) agreed that they would not participate and (n=12/27%) remained neutral.

Statement 36: My nursing colleagues will use their influence to make decisions that favour themselves and not consider others (n=44/100%).

In Table 4.8 half (n=22/50%) agreed that their colleagues would use their influence to achieve decision-making to favour themselves. Ten (n=10/23%) disagreed with the statement and (n=12/27%) remained neutral.

Statement 64: I respect the opinions of my nursing colleagues, especially when they know more than I do about a subject or an issue (n=44/100%).

The majority (n=43/98%) agreed that that they respected the opinions of their colleagues if more knowledgeable. One (1/2%) respondent was neutral in response (Table 4.8).

Statement 74: I do not respect the knowledge of my nursing colleagues especially if they do not consider me in their decisions (n=44/100%).

In table 4.8 (n=32/73%) disagreed with the statement which suggested that they do respect the knowledge of their colleagues even if not included in decision making. One (n=1/2%) agreed that they are not respectful of the knowledge of colleagues if not included in decision making. Eleven (n=11/25%) were neutral.

In a study by Chipps *et al* (2013:479), it was found that having one's opinion ignored is the most common bullying act. In spite of this, the respondents suggested by their responses to statements 64, where ninety eight percent (98%) and statement 74 where seventy three (73%) implied that they respect the opinions of more knowledgeable colleagues even if their opinions are not considered. This contrasts with the response to statement 36 where half indicated that they perceive their colleagues to be self-seeking.

Table 4.8: Responses to statements on Dominating

		Agree		Neutral		Disagree	
No	**Question**	**n**	**%**	**n**	**%**	**n**	**%**
18	If a decision is made that I don't like, I won't say so outwardly, but will not do what is required, or participate in the actions.	11	25	12	27	21	48
36	My nursing colleagues will use their influence to make decisions that favour themselves and not consider others.	22	50	12	27	10	23
64	I respect the opinions of my nursing colleagues, especially when they know more than I do about a subject or an issue.	43	98	1	2	0	0
74	I do not respect the knowledge of my nursing colleagues especially if they don't consider me in their decisions.	1	2	11	25	32	73

4.5.6 Compromising

Statement 33: I make suggestions to sort out problems that are difficult to solve (n=44/100%).

The majority (n=39/89%) of the respondents agreed that they would contribute to problem-solving by making suggestions. There were four (4=9%) neutral responses and one (n=1/2%) missing response (Table 4.9).

Statement 48: I always try to get along with my nursing colleagues and supervisors (n=44/100%).

The majority (n=39/89%) agreed that they always try to get along with their colleagues and superiors. Three (n=3/7%) disagreed and there were (n=2/4%) neutral responses (Table 4.9).

Statement 62: I like to find a neutral way to move past differences of opinion with my nursing colleagues (n=44/100%).

In Table 4.9 the (n=30/68%) agreed that they liked to find an impartial way of solving differences of opinion. Four (n=4/9%) disagreed and ten (10/23%) were neutral in response.

Statement 67: If there are problems or disagreements, I like discussion with my nursing colleagues so that we can come to an agreement (n=44/100%).

The majority (n=38/86%) agreed that they enjoyed discussion with their colleagues so that mutual agreements can be reached. Six (n=6/14%) remained neutral (Table 4.9).

It can be deduced from the majority of the responses to the statements 33, 48, 62 and 67 that the participants prefer to compromise in order to cooperate with colleagues. Al-Hamdan *et al.,* (2011:577) aver that compromising plays a role when obliging or collaborative interactions are absent. It is also the first choice when settling issues that are not major, and settling complex issues when it is not worth being disruptive of goals that are more important than the issue that has arisen. It was noted that there were 23% neutral responses to statement 62 in spite of the majority agreeing with the statement

Table 4.9: Responses to statements on Compromising

		Agree		Neutral		Disagree		Missing	
No	Statement	n	%	n	%	n	%	n	%
33	I make suggestions to sort out problems that are difficult to solve.	39	89	4	9	0	0	1	2
48	I always try to get along with my nursing colleagues and supervisors.	39	89	2	4	3	7		
62	I like to find a neutral way to move past differences of opinion and with my nursing colleagues.	30	68	10	23	4	9		
67	If there are problems or disagreements, I like discussion with my nursing colleagues so that we can come to an agreement.	38	86	6	14	0	0		

4.5.7 Avoiding

Statement 9: I like to discuss problems honestly with my nursing colleagues (n=44/100%).

The majority (n=35/80%) strongly agreed that they prefer honest discussion with their colleagues when there are problems. Nine (9=20%) remained neutral in response to this statement (Table 4.10).

Statement 60: I enjoy sorting out problems even if there are differences of opinion (n=44/100%).

In Table 4.10 sixty-eight percent (n=30/68%) of the respondents agreed that they enjoyed solving problems, even when there are differences of opinion. There were (n=14/32%) neutral responses to the statement.

Statement 65: I prefer to "go with the flow" rather than face disagreements (n=44/100%).

In Table 4.10 the majority disagreed (n=16/36%), fourteen (n=14/32%) respondents agreed that they preferred to go with the flow in order to avoid disagreements. An equal number remained neutral.

Statement 72: I try to keep things pleasant with my colleagues at all costs (n=44/100%).

The majority (n=34/78%) agreed to this statement. One (n=1/2%) respondent disagreed and nine (n=9/20%) respondents remained neutral (Table 4.10).

The researcher calculated the average neutral response at twenty six percent (26%). The responses to statements 9, 16, 72 imply that avoiding is not the preferred behavior. Avoiding

is considered the least preferred method of interaction with colleagues following a study in Oman by Al-Hamdan *et al.* (2011:572). Avoiding as negative behavior can be associated with emotional exhaustion which could have an effect in the working environment and reduction in morale (Chipps *et al.,* 2013:491).

The response to statement 65 is undetermined as the responses to the statement were almost equal, with agree, neutral and disagree. This may be explained by non-response bias with regards to the question, or possible avoidance of answering or a genuine inability to answer. The neutral responses were in contrast to the majority. In response to statement 60 and 72 where the majority indicated that problem solving and pleasant relationships with their colleagues was preferred behavior.

Table 4.10: Responses to statements on Avoiding

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
9	I like to discuss problems honestly with my nursing colleagues.	35	80	9	20	0	0
60	I enjoy sorting out problems even if there are differences of opinion.	30	68	14	32	0	0
65	I prefer to "go with the flow" rather than face disagreements.	14	32	14	32	16	36
72	I try to keep things pleasant with my colleagues at all costs.	34	78	9	20	1	2

4.5.8 Morale

Statement 15: There is a good collaborative atmosphere in the department (n=44/100%).

In Table 4.11 less than half (n=19/43%) of the respondents agreed that the atmosphere in the department is collaborative. Nine (n=9/21%) disagreed and (n=16/36%) remained neutral to the statement.

Statement 25: I am highly motivated in my work and enjoy the work that I do (n=44/100%).

Thirty three (n=33/75%) respondents agreed that they were highly motivated and enjoyed their work. Eleven (n=11/25%) were neutral in response to the statement (Table 4.11).

Statement 37: My nursing colleagues seem to enjoy the work that they do (n=44/100%).
In Table 4.11 half of the respondents (n=23/52%) agreed that their colleagues enjoy the work that they do, and one (n=1/2%) respondent disagreed. It was noted that 46% remained neutral.

Statement 59: My senior nursing colleagues are supportive of me when there are difficulties, and I am able to resolve them (n=44/100%).
In Table 4.11 (n=31/71%) respondents agreed that their colleagues are supportive, and (n=5/11%) disagreed with the statement. In response (n=8/18%) were neutral.

In statement 15 less than half the respondents agreed that the morale in the department is good. This contrasted with the response to statement 25, where most of the respondents said that they are highly motivated; with statement 59 where they indicated they are supported by their colleagues and statement 37 where the perception is that their colleagues enjoyed their work.

According to Roussel (2011:124,125), high morale is associated with teamwork, open communication, innovation, trust, organisational flexibility, performance feedback, resources to empower task execution, integrated problem solving, support, participation in goal setting and decision making as part of a team.

The researcher calculated the average of the neutral responses to be 31%. It can be deduced that there is a pervasive lack of morale in spite of the majority who agreed with the questions on morale.

Table 4.11: Responses to statements on Morale

No	Statement	Agree		Neutral		Disagree	
		n	%	n	%	n	%
15	There is a good collaborative atmosphere in the department.	19	43	16	36	9	21
25	I am highly motivated in my work and enjoy the work that I do.	33	75	11	25	0	0
37	My nursing colleagues seem to enjoy the work that they do.	23	52	20	46	1	2
59	My senior nursing colleagues are supportive of me when there are difficulties, and I am able to resolve them.	31	71	8	18	5	11

4.5.9 Respect

Statement 49: I understand being respectful towards my nursing colleagues, as being admiring of their knowledge, qualities, and skills (n=44/100%).

In Table 4.12 the majority (n=41/93%) of the respondents agreed that they consider admiration of a colleague's skills, knowledge and qualities as being respectful. There were (n=3/7%) neutral responses to the statement.

Statement 55: I understand respect towards my nursing colleagues, as being considerate of their feelings and their rights (n=44/100%).

The majority (n=43/98%) agreed that they understand that respect is to show consideration for the rights and feelings of others. There was one (n=1/2%) neutral response to the statement (Table 4.12).

Statement 69: I respect my nursing colleague's opinions and ways of working (n=44/100%).

The majority (n=40/91%) agreed that they respected their colleague's ways of working and opinions. One (n=1/2%) disagreed that they respected the working methods of their colleagues. There were three (n=3/7%) neutral responses to the statement (Table 4.12).

Statement 75: My nursing colleagues respect me (n=44/100%).

In Table 4.12 thirty one (n=31/71%) respondents agreed that their colleagues respected them. One (n=1/2%) respondent disagreed with the statement. It was noted that (n=12/27%) remained neutral in response to the statement.

In response to statements 49, 55 and 69 the majority agreed that respect for the way others work, including consideration and empathy is important.

Respect for the self-esteem of others is an essential requirement of professional behaviour, when communicating by using clear, assertive messages to others (Scully & Dallas, 2005:94). It consists of treating the other person with esteem or admiration and honour (Gottlieb, 2012:149). It should be a way of life and not once-off behavior (Gantz, 2010:268).

The 27% neutral responses for statement 75 in spite of the majority (71%) saying that their colleagues respect them, may relate to the subjective perception of the participants,

Table 4.12: Responses to statements on Respect

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
49	I understand being respectful towards my nursing colleagues, as being admiring of their knowledge, qualities, and skills.	41	93	3	7	0	0
55	I understand respect towards my nursing colleagues, as being considerate of their feelings and their rights.	43	98	1	2	0	0
69	I respect my nursing colleague's opinions and ways of working.	40	91	3	7	1	2
75	My nursing colleagues respect me.	31	71	12	27	1	2

4.5.10 Perceptions

Statement 11: When I speak I am aware that my nursing colleagues will form an opinion of me (n=44/100%).

In Table 4.13 the respondents (n=38/87%) agreed that they are aware that during spoken communication, others are forming an opinion of them. One (n=1/2%) disagreed with the statement and five (n=5/11%) were neutral in response.

Statement 28: There are times in conversation with my nursing colleagues, that I don't understand exactly what is being said (n=44/100%).

In response to the statement most respondents (n=19/43%) agreed that there are times during a conversation when they do not understand what is being said. Thirteen (n=13/30%)

disagreed with the statement. There were twelve (n=12/27%) neutral responses (Table 4.13).

Statement 38: There are times when my nursing colleagues and I have conversations, where I don't exactly see their purpose or intentions (n=44/100%).

In Table 4.13 most of the responses (n=20/46%) remained neutral which did not indicate whether or not there are times that they do not see the purposes or intentions of their colleagues. There were thirteen (n=13/29%) respondents who agreed that they do not understand the purposes or intentions of their colleagues. Eleven (n=11/25%) respondents disagreed with the statement.

Statement 70: When I have conversations with my nursing colleagues, I am very aware of what their behaviours mean with regard to the situation or me (n=44/100%).

The majority (n=34/77%) agreed that there is a perceived awareness of their colleagues and their behavior in various situations. Three (n=3/7%) respondents disagreed that they are aware of what the behaviours of their colleagues mean. Seven (n=7/16%) were neutral in response to the statement (Table 4.13).

The responses to statements 11 and 70 suggest that the respondents are aware of each other when interacting with their colleagues. In response to statements 28 and 38 there was a marginal majority whose response indicated that there was not always understanding of their colleagues. Few responses disagreed with the statements. The average neutral responses were 25%. This could be due to subjective responses in view of self and others, which may have distorted the responses (Al-Hamdan *et al.*, 2011:577). Perception is considered the degree to which individual awareness of the environment actually mirrors reality (Kelly & Marthaler, 2011:105).

Table 4.13: Responses to statements on Perceptions

		Agree		Neutral		Disagree	
No	Question	n	%	n	%	n	%
11	When I speak I am aware that my nursing colleagues will form an opinion of me.	38	87	5	11	1	2
28	There are times in conversation with my nursing colleagues, that I don't understand exactly what is being said.	19	43	12	27	13	30
38	There are times when my nursing colleagues and I have conversations, where I don't exactly see their purpose or intentions.	13	29	20	46	11	25
70	When I have conversations with my nursing colleagues, I am very aware of what their behaviors mean with regards to the situation or me.	34	77	7	16	3	7

4.5.11 Attentiveness

Statement 22: I am always aware of how my nursing colleagues or supervisors respond to me, when I have conversations with them (n=44/100%).

The majority of the respondents (n=38/87%) agreed that they are aware of how their colleagues respond to them in conversations. One (n=1/2%) respondent disagreed that they are always aware of the responses of others while conversing, and five (n=5/11%) were neutral in response to the statement (Table 4.14).

Statement 30: When my nursing colleagues speak to me, there are times when my mind wanders (n=44/100%).

In Table 4.14 response (n=21/48%) disagreed that they are not always attentive when their colleagues are speaking to them. Fourteen (n=14/32%) agreed that there are times during conversations that their mind wanders. Nine (n=9/20%) respondents remained neutral to the statement.

Statement 71: When there are conversations with my nursing colleagues, I listen carefully to what is being said (n=44/100%).

The majority (n=39/89%) agreed that they listen carefully during conversations with their colleagues. One (n=1/2%) respondent disagreed with the statement and four (n=4/9%) were neutral in response (Table 4.14).

The responses to statements 22, 30 and 71 suggest that the participants are aware of their colleagues and are attentive in their interactions. Attentiveness is being focused on the moment and notices moment-to-moment changes that consider others. In nursing attentiveness includes focus without interruption, followed by reflection (Cody 2013:380).

An average of 13% neutral responses was calculated by the researcher for attentiveness. These may be due to genuinely not having an opinion as explained previously.

Table 4.14: Responses to statements on Attentiveness

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
22	I am always aware of how my nursing colleagues or supervisors respond to me, when I have conversations with them.	38	87	5	11	1	2
30	When my nursing colleagues speak to me, there are times when my mind wanders.	14	32	9	20	21	48
71	When there are conversations with my nursing colleagues, I listen carefully to what is being said.	39	89	4	9	1	2

4.5.12 Responsiveness

Statement 12: There are times when I am not sure exactly what to say and I am unsure of how to relate to my nursing colleagues (n=44/100%).

In Table 4.15 half (n=22/50%) of the respondents agreed that there are times when they do not know how to relate to their colleagues. Ten (n=10/23%) disagreed that there are times when unsure of how to relate to their colleagues. Twelve (n=12/27%) respondents remained neutral in response.

Statement 27: There are times when I want to say something positive, or I think I know what to say to my nursing colleagues, but I miss the opportunity because I can't find the words (n=44/100%).

Fifteen (n=15/34%) agreed that there are times that they miss the opportunity to say something positive as not able to find the words. An equal number (n=15/32%) disagreed with the statement. Thirty-two percent of the respondents (n=14/32%) remained neutral in response to this variable (Table 4.15).

Statement 56: Sometimes I am not sure of how to respond to what my nursing colleagues are saying to me (n=44/100%).

Seventeen of the respondents (n=17/38%) remained neutral in response to this statement, which was most of the respondents. Fourteen (n=14/32%) agreed that they are not sure of how to respond to their colleagues at times and thirteen (13/30%) disagreed with the statement (Table 4.15).

Statement 66: When relating to my nursing colleagues I am confident and sure of what to say and do (n=44/100%).

In table 4.16 most of the respondents (n=31/70%) agreed that they are confident and sure of what to say and do when relating to their colleagues. Thirteen respondents (n=13/30%) remained neutral (Table 4.15).

The agree responses for statements 12 and 66 which are in the majority, do not support each other. The outcomes suggest opposing points of view in terms of responsiveness. In response to statements 27 and 56 have very similar responses to the agree and disagree statements and no clear indication of the point of view of the respondents can be seen. The response needs to correspond with the context of the communication being received (Kelly & Marthaler, 2011:84).

The researcher calculated the average neutral responses for this section to be thirty two percent (32%), as all the statements had neutral responses causing potential non-response bias. The neutral responses can be explained as possibly being related to subjectivity and a probable unwillingness from the participants to admit a personal lack of responsiveness. Responsiveness is an aspect of communication which can be clear, responsive, spontaneous and sensitive, or confused and stifled and it always involves listening (Wheeler, 2013:455).

Table 4.15: Responses to statements on Responsiveness

		Agree		Neutral		Disagree	
No	Statement	N	%	N	%	n	%
12	There are times when I am not sure exactly what to say and I am unsure of how to relate to my nursing colleagues.	22	50	12	27	10	23
27	There are times when I want to say something positive, or I think I know what to say to my nursing colleagues, but I miss the opportunity because I can't find the words.	15	34	14	32	15	34
56	Sometimes I am not sure of how to respond to what my nursing colleagues are saying to me.	14	32	17	38	13	30
66	When relating to my nursing colleagues I am confident and sure of what to say and do.	31	70	13	30	0	0

4.5.13 Communication

Statement 16: When it is important to show that I am right, I will argue with my nursing colleagues (n=44/100%).

Twenty one respondents (n=21/48%) agreed that they will argue in order to show that they are right. Seven (n=7/16%) disagreed that they would argue and sixteen respondents (n=16/36%) remained neutral in response to this statement (Table 4.16).

Statement 46: I am adaptable and flexible with my nursing colleagues (n=44/100%).

The majority (n=42/96%) agreed that they are adaptable and flexible with their nursing colleagues. Two (n=2/4%) were neutral in response to the statement (Table 4.16).

Statement 53: I communicate well, and am therefore easily able to get on with my nursing colleagues (n=44/100%).

In Table 4.16 the respondent majority (n=39/89%) agreed that they communicate well and get on well with their colleagues. Five (n=5/11%) remained neutral.

Statement 78: I am easily misunderstood by my nursing colleagues due to my coming from a different culture to them (n=44/100%).

Seventeen respondents (n=17/39%) remained neutral. Fifteen respondents (n=15/34%) agreed with the statement and (n=12/27%) disagreed with this statement (Table 4.16).

The agree responses to statements 46 and 53 suggest that the participants consider themselves to communicate well. Communication skills include compromise, cultural understanding, listening, attentiveness and perception (Scully & Dallas, 2005: 94,96,124). This is in spite of the response to statement 16 where they are argumentative at times, and a perception in response to statement 78 that they are misunderstood at times.

Twenty-three percent of the neutral choice is observed for all the statements on communication. The neutral responses are a concern in relation to the factor communication may be due to how the respondents see and others in communication. Roussel (2011:179) notes that in nursing, that people often do not see the same thing while communicating due to differing scopes of perception.

Table 4.16: Responses to statements on Communication

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
16	When it is important to show that I am right, I will argue with my nursing colleagues.	21	48	16	36	7	16
46	I am adaptable and flexible with my nursing colleagues	42	96	2	4	0	0
53	I communicate well and am easily able to get on well with my colleagues.	39	89	5	11	0	0
78	I am easily misunderstood by my nursing colleagues due to my coming from a different culture to them.	15	34	17	39	12	27

4.5.14 Culture

Statement 23: I prefer to work with nursing colleagues from the same nationality as my own (n=44/100%).

Most respondents (n=26/59%) disagreed that they preferred to work with colleagues whose nationality was the same as theirs. Three (n=3/7%) agreed that they preferred to work with their own nationality. Fifteen (n=15/34%) respondents remained neutral (Table 4.17).

Statement 32: I find it stimulating and interesting that there are nursing colleagues from different cultures to work with (n=44/100%).

In Table 4.17 the majority (n=42/96%) agreed that working with colleagues from other cultures is stimulating and interesting. Two (n=2/4%) remained neutral.

Statement 40: I understand that my nursing colleagues that are from a different country to myself see things differently to me (n=44/100%).
In response, the majority (n=35/80%) agreed that colleagues from different countries would perceive things differently to themselves. Two (n=2/4%) disagreed that other cultures would see things differently and seven (n=7/16%) remained neutral (Table 4.17).

Statement 51: I find it difficult adjusting on a daily basis to how the unit runs when different cultures are in charge from day to day (n=44/100%).
Twenty three (n=23/52%) disagreed that it was difficult adjusting to cultures other than their own running the unit. Fourteen (n=14/32%) agreed that it is difficult to adjust to different cultures running the unit on a day to day basis. There were seven (n=7/16%) neutral responses (Table 4.17)

It is possible to deduce for the majority of the responses to statements 23, 32 and 40 that the respondents enjoy working with different nationalities, and that others would have different perceptions as a result. Each individual comes from a social situation through which social behaviour has been developed, and therefore takes that for granted (Schein, 2010:388).

There are neutral responses to all of the statements in this section with 34% neutral in response to working with differing nationalities. This suggests that the respondents are non-committal regarding working with other nationalities in spite of most of the respondents indicating that they did not mind working with other nationalities. In statement 51 the respondents are ambivalent about working with different cultures in charge on a day to day basis. The responses to these statements infer that the respondents are possibly not as culturally competent as perceived.

Culture is shaped by our own behaviour and is constantly being re-enacted in terms of interactions with others and is a dynamic and coercive phenomenon that has many influences on people. In organisations, cultures differ in stability and strength and are the result of leadership and group entrenchment (Schein, 2010:3).

Cultural competence is recognised as being a key element needed for interaction and communication and is a continuous process, where the aim is to achieve the ability to work effectively within groups that are culturally diverse. Within this context it is vital that in interaction that there is both professional and personal respect for the differences and similarities of others. Cultural competence will improve communication and interaction and is necessary for high quality care (Tseng & Streltzer, 2008:18).

Table 4.17: Responses to statements on Culture

No	Statement	Agree		Neutral		Disagree	
		n	%	n	%	%	%
23	I prefer to work with nursing colleagues from the same nationality as my own.	3	7	15	34	26	59
32	I find it stimulating and interesting that there are nursing colleagues from different cultures to work with.	42	96	2	4	0	0
40	I understand that my nursing colleagues that are from different country to myself see things differently to me.	35	80	7	16	2	4
51	I find it difficult adjusting on a daily basis to how the unit runs when different cultures are in charge from day to day.	14	32	7	16	23	52

4.5.15 Attitude

Statement 14: My colleagues have not encouraged or given me the credit that I should have received, when I have done something well (n=44/100%).

In Table 4.18 the responses showed that the seventeen of the respondents (n=17/39%) agreed that they do not feel they are given enough credit for doing things well. Thirteen (n=13/29%) remained neutral and fourteen (n=14/31%) disagreed with the statement.

Statement 20: My nursing colleagues are reliable, consistent and I can count on them at all times (n=44/100%).

Nineteen of the respondents (n=19/43%) agreed that they could rely on their colleagues and the same number (n=19/43%) were neutral in response to this statement. Six (n=6/14%) disagreed with the statement (Table 4.18).

Statement 43: I have been deliberately misunderstood by my nursing colleagues at times (n=44/100%).

In Table 4.18 twenty-one respondents (n=21/48%) were neutral in response to this statement. Nine (n=9/20%) agreed that they have been deliberately misunderstood by their colleagues and fourteen (n=14/32%) disagreed with the statement.

Statement 77: My nursing colleagues talk about me behind my back (n=44/100%).

The response to this statement showed that half of the respondents (n=22/50%) remained neutral. Fifteen (n=15/34%) respondents agreed that their colleagues do talk behind their back and seven (n=7/16%) disagreed with the statement (Table 4.18).

A major concern in this section is the 43% of neutral responses and is problematic in the light of the respondents' attitude towards themselves and their colleagues. Attitude has been described by Duffy (2008:66) as being the intention involving choice. It includes the subjective beliefs of an individual, the subjective and individual assessment of the consequence of the behavior, and the subjective assessment or perception of how others would see them if they behave in a certain way.

In light of the high percentage of neutral response it can be deduced that non-response bias has possibly affected the outcomes of this section on attitude and therefore no clear outcome can be determined. Further deductions can be made from the subjective elements involved in attitude that individuals were possibly not willing to comment on their own attitude or that of others. Attitudes and feelings have an influence on the quality of professional relationships (Scully & Dallas, 2005:94).

Table 4.18: Responses to statements on Attitude

		Agree		Neutral		Disagree	
No	**Statements**	**n**	**%**	**n**	**%**	**N**	**%**
14	My colleagues have not encouraged or given me the credit that I should have received, when I have done something well.	17	39	13	29	14	32
20	My nursing colleagues are reliable, consistent and I can count on them at all times.	19	43	19	43	6	14
43	I have been deliberately misunderstood by my nursing colleagues at times.	9	20	21	48	14	32
77	My nursing colleagues talk about me behind my back.	15	34	22	50	7	16

4.5.16 Lateral violence

Statement 21: If I don't want to do something that I don't like, even if it is part of my normal work, I don't say anything, but avoid the task and don't do it anyway (n=44/100%).

Thirty (n=30/68%) of the respondents disagreed that they covertly avoided tasks they did not like. Seven (n=7/16%) agreed that they do avoid tasks they do not like. There was one

(n=1/2%) missing response to this statement (Table 4.19). Many tasks and responsibilities in the operating room are tedious or unpleasant. Sharing of the workload, including unpleasant tasks is part of team work. Since, 16% (n=7) of the respondents truthfully admitted their avoidance, it can be deduced that sharing of task in the research setting is not enforced. It is a concern since should the 68% of the respondents be unavailable, the standard of nursing care could be jeopardized.

Statement 29: My nursing colleagues tend to manipulate me at times, and this makes me feel as though I am not able to trust them (n=44/100%).

In Table 4.19, eighteen of the respondents (n=18/41%) disagreed that they feel manipulated at times and are not able to trust their colleagues. Nine (n=9/20%) agreed. Seventeen of the respondents (n=17/39%) remained neutral which can be interpreted that they recognize that they might be the manipulator or manipulated. It is incumbent on the nurse managers to monitor work outputs of staff members and to share the workload equitably. Burnout and resentment could set in, which undermines trust in team members.

Statement 47: When my nursing colleagues get angry, it seems to be to try to dominate or control me, or the situation, and it makes me act negatively towards them (n=44/100%).

In Table 4.19 nineteen of the respondents (n=19/43%) disagreed that anger from their colleagues dominated or controlled them, provoking a negative response. Thirteen of the respondents (n=13/30%) remained neutral. Twelve (n=12/27%) agreed with the statement.

Statement 61: I have felt bullied at times by my nursing colleagues and this has affected the way that I am able to work with them (n=44/100%).

The response showed that fifteen respondents (n=15/34%) agreed that they have felt bullied at times and that their working relationship was affected as a result. Nineteen respondents (n=19/43%) disagreed that they have felt bullied to the extent it affected their working relationship. There were ten (n=10/23%) neutral responses to this statement (Table 4.19).

For the aspect of lateral violence, the Spearman's Rank Correlation test showed that experience since qualifying in relationship to the factor lateral violence, showed a significant result $p<0.045239$, which indicates that there is an association between experience and lateral violence. This is corroborated by Coursey, Rodriques, Dieckmann and Austin (2013:101) who identified that experienced nurses are often the perpetrators of lateral violence.

Twenty seven percent neutral responses were indicated for these statements. This is immensely concerning and could be due to non-response bias The responses to the

statements 21, 29, 47, and 61 showed that most of the respondents disagreed with the statements, which would imply that lateral violence is not a problem. There were fewer responses agreeing with the statements. Chipps *et al (*2013:487) state that acknowledging bullying can be misrepresented as it would be an admission of personal weakness, and that bullying behaviours may not be recgnised as such by the respondents.

Lateral violence, bullying or negative behaviour are considered to be the same entities and are 'repeated and persistent negative acts toward one or more individuals' (Chipps *et al,* 2013:480) and create hostility in the workplace. It is directed at co-workers in the hierarchy of an organisation and involves disruptive or interfering behaviour, bullying, and a lack of respect (Embee & White, 2010:167). The perioperative area is frequently viewed as an area where there is stress, bullying and disruptive behaviour, as well as interpersonal conflict.

Table 4.19: Responses to statements on Lateral Violence

		Agree		Neutral		Disagree		Missing	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
21	If I don't want to do something that I don't like, even if it is part of my normal work, I don't say anything, but avoid the task and don't do it anyway.	7	16	6	14	30	68	1	2
29	My nursing colleagues tend to manipulate me at times, and this makes me feel as though I am not able to trust them.	9	20	17	39	18	41		
47	When my nursing colleagues get angry, it seems to be to try to dominate or control me, or the situation, and it makes me act negatively towards them.	12	27	13	30	19	43		
61	I have felt bullied at times by my nursing colleagues and this has affected the way that I am able to work with them.	15	34	10	23	19	43		

4.5.17 Teamwork

Statement 13: I enjoy working in a team and would say that I am a team player (n=44/100%).

In Table 4.20 the majority of the respondents (n=39/89%) agreed that they are team players and enjoy being part of a team. Five respondents (n=5/11%) were neutral. It is a concern that 11% of the respondents did not indicate whether or not they considered themselves team players.

Statement 44: I understand teamwork to be collaborative, but it also allows me to work independently to contribute to the team.

The majority (n=40/91%) agreed that they understood that teamwork is collaborative while allowing independence in order to contribute to the team. One (n=1/2%) respondent disagreed and three (n=3/7%) remained neutral (Table 4.20).

Statement 50: When it is busy our nursing colleagues are willing to help each other without being asked.

Less than half of the respondents (n=21/48%) agreed that their nursing colleagues are willing to help without being asked. Thirteen respondents (n=13/30%) remained neutral in response to this statement. Ten (n=10/22%) respondents disagreed with the statement (Table 4.20). These results are of great concern. The majority of the responses were either neutral or they disagreed. This indicates that team coherence, which is the basis of effective patient care, is absent in this research setting.

Statement 68: I prefer to do things that I know need to be done, alone, even if others don't participate in the work that needs teamwork (n=44/100%).

In Table 4.20 in response, half (n=22/50%) of the respondents agreed that they prefer to work alone to complete the work even when others in the team are not participating. Almost 50% of the remaining respondents (n=12/27%) disagreed or were neutral (n=10/22%). There appears to be a major breakdown in the purpose of the nurses which is the delivery of excellent patient care.

The neutral responses to statements 50 and 68 infer that team coherence in this research setting is absent. In addition, only half of the respondents agreed with statements 50 and 68.

In response to statement 13 it is a concern that eleven percent (11%) of the respondents did not indicate whether or not they considered themselves team players. Barriers in communication, collaboration and selfish collegial behavior can have a serious effect on teamwork with dire consequences. Moreover exclusion or alienation of workmates from the team exacerbates the powerful hierarchies that have a continual impact on optimal team performance (Reid & Bromley, 2012:38). A key factor in nursing is considered the ability to be able to work in a team (Scully & Dallas, 2005:174).

No significant results were obtained between specific qualifications and teamwork using the Kruskal-Wallis test.

Table 4.20: Responses to statements on Teamwork

		Agree		Neutral		Disagree	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**
13	I enjoy working in a team and would say that I am a team player.	39	89	5	11	0	0
44	I understand teamwork to be collaborative, but it also allows me to work independently to contribute to the team.	40	91	3	7	1	2
50	When it is busy our nursing colleagues are willing to help each other without being asked.	21	48	13	30	10	22
68	I prefer to do things that I know need to be done, alone, even if others don't participate in the work that needs teamwork.	22	50	10	22	12	27

4.5.18 Task Management

Statement 17: If I am not sure of how to do something that is required, I will always ask my nursing colleagues, team leader or supervisor, so that I can carry out my duties efficiently (n=44/100%).

In Table 4.21 the majority (n=41/93%) agreed that they would ask for help if not sure how to execute a task. One (n=1/2%) disagreed with the statement and two (n=2/5%) remained neutral.

Statement 31: When I disagree with my nursing colleagues or supervisor it has a negative effect on how I do my work (n=44/100%).

Half (n=22/50%) disagreed that there was a negative effect on Task Management when there were disagreements. Eleven (n=11/25%) agreed that when there was disagreement with colleagues it affected their work. There were eleven (n=11/25%) neutral responses to the statement (Table 4.21). It is noteworthy that half the respondents are confident that disagreements do not negatively influence their execution of tasks. This could be attributed to maturity and work experience or to lack of sensitivity to the work climate. The 25% who indicated that their work suffered is a concern, since this shows that a quarter of the workforce is underperforming. The remaining 25% (neutral responses) is equally alarming as it is indicative of a covert insensitivity towards the importance of poor team cohesion.

Statement 34: It is important to me to do my work well (n=44/100%).

In Table 4.21 ninety three percent (n=41/93%) agreed that it is important for them to do their work well. Three (n=3/7%) respondents remained neutral. Despite the majority agreeing to this statement, there appears to be lack of commitment to work ethic in three of the respondents.

Statement 41: I manage my daily workload more easily when I get on well with my nursing colleagues or supervisor (n=44/100%).

In Table 4.21 the majority (n=39/89%) agreed that they managed their daily workload more easily when getting on well with colleagues. There was one (n=1/2%) disagree response to the statement and one (n=1/2%) missing response to this statement. Three (n=3/7%) respondents remained neutral.

Although the majority agreed to this statement, the balance of 11% indicates that either they are impervious to collegial relationships or their low morale has resulted in them not caring. This is particularly disturbing as the promotion of a culture of safety and team communication is central to operating room nursing. Furthermore, according to Chipps, Stelmaschuk, Albert, Bernhard and Holloman (2013:479) in a study on workplace bullying in the operating room, emotional exhaustion was correlated with bullying or disruptive behaviours, either personally experienced or witnessed.

The majority agreed with the statements 17 and 41, which suggests good task management. The majority response to statement 34 implied that the respondents find it important to do their work well. In response to statement 31 it is noteworthy that half the respondents are confident that disagreements do not affect task management negatively. This is contradicted in the same statement by the neutral responses and the responses which suggest that disagreements do have an effect on task management. It can be deduced that there is poor cohesion in the execution of tasks in the team.

Task management is when nursing duties that have been assigned are being implemented, and is the acceptance of responsibility and accountability in order to execute the delegated tasks. It is a shared responsibility for both the delegator and the delegate (Kelly & Marthaler, 2011:12). Efficient execution of tasks relies on clear communication within the team, which is reliant on healthy interpersonal relationships. Of concern in this factor, are the neutral responses as it can be interpreted that the respondents were non-committal on the effect that disagreements have on task execution.

Nursing care is described by Benner, Tanner and Chesla (2009:427,433), as being extensive and intensive, with small error margins, and that excellence in practice needs to be encouraged and recognized, especially where cooperative teamwork and good communication play a role.

No significant results were obtained between task management with specific qualifications and age using the Kruskal-Wallis test.

Table 4.21: Responses to statements on Task Management

		Agree		Neutral		Disagree		Missing	
No	**Statement**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
17	If I am not sure of how to do something that is required, I will always ask my nursing colleagues, team leader or supervisor, so that I can carry out my duties efficiently.	41	93	2	5	1	2		
31	When I disagree with my nursing colleagues or supervisor it has a negative effect on how I do my work.	11	25	11	25	22	50		
34	It is important to me to do my work well.	41	93	3	7	0	0		
41	I manage my daily workload more easily when I get on well with my nursing colleagues or supervisor.	39	89	3	7	1	2	1	2

4.6 SECTION C: OPEN-ENDED QUESTIONS

Section C of the questionnaire consisted of open-ended questions related to the objectives of the study. These questions provided the respondents the opportunity of expressing their opinions of RN interaction for the researcher to discover what is really important to them (Delport, 2005, 174).

The responses were analysed by the researcher. Themes were identified through the use of keywords from the written responses to the questions. The keywords were tabulated on an Excel spreadsheet. The two main themes that emerged from the responses were respect and communication, which were considered the most important aspects of interaction with their colleagues. A sub-theme which emerged in response to the second open-ended question was teamwork, where eighteen (n=18/41%) participants commented on teamwork.

There were other aspects noted while identifying themes, but the responses were isolated and made little difference to the themes in terms of context. Some of these elements were language, listening, honesty, integrity, culture difference, opinion, perspective, vindictive behavior, fairness, understanding, cooperation and work ethic. No clear sub-theme emerged from these responses.

Some comments from the respondents will be quoted below, which provide insight and links to the factors being examined. The comments are quoted exactly as written, bearing in mind that English is often not the first language of the respondent being quoted.

4.6.1 Open-ended question 1: What is/are the most important aspect/s, or factor/s, for you when you are interacting with your nursing colleagues?

The respondents were requested to say what the most important factor in interactions with their colleagues are. The majority (n=40/91%), added comments. The minority (n=4/9%) did not add a comment.

The most stated responses to the open-ended statements, were Respect (n=28/64%) and Communication (n=16/36%). Eight (n=8/18%) respondents added both respect and communication as being important, and four respondents (n=4/9%) did not add a comment in response to the question.

Some quoted comments from the questionnaire to this question follow below, exactly as written. The comments are from respondents who come from; India, South Africa, Philippines, Saudi Arabia, and Jordan.

Within the context or theme of respect, communication was included within the context of teamwork.

> *"…Respect, collaporative[sic], good communication, team work…"*
>
> Participant B1: S.C.1

Respect as being of value, was continued by another participant who said;

> *"…The mutual respect of one another's nursing background and the team work approach. The respect that is shown to my opinions and suggestions. The ultimate focus despite everything must be about the patient…"*
>
> Participant A1: S.C.1

A different participant said that;

"…It is important to listen and respect what they are telling you…"

Participant C1: S.C.1

Within the context of respect, listening was included. The element of listening within interaction as a factor within communication was continued by a participant who said that,

"…Interaction with colleagues one of the important factor is better communication. The way I am interacting to them. Listening capacity also should have. Respect each other and work together…"

Participant D1:S.C.1

The participants highlighted the aspects of respect and communication as being important, and in the context of the statements made by the participants the elements of teamwork and listening emerged. In addition to which a participant said that the patient was the primary aspect of focus in terms of respect and teamwork.

4.6.2 Open-ended question 2: Does the way you interact with your nursing colleagues have an impact on the work you are assigned to do for the day?

Thirty seven respondents (n=37/84%) said yes and seven respondents (n=7/16%) said no. The respondents were also requested to say why they had selected their response. The majority (n=24/55%), added a comment. Twenty respondents (n=20/45%) did not comment.

In response, the themes of respect and communication continued. The context of teamwork as an element relevant to the stated importance of respect and communication emerged as a sub-theme in response to this question.

Eighteen participants (n=18/41%) included teamwork in their written responses. In light of only twenty (n=20/45%) participants having written a response, the eighteen participants formed ninety percent (90%) of those who added teamwork within their written comments to the question.

Communication as a factor relevant within the context of teamwork, is stated below;

"…Yes, because if you have good communication or interaction with your colleagues you can work and function well as a team…"

Participant C1:S.C.2

And continued within the context of teamwork;

> *"…If I work with a good team and working as teamwork with good communication it will sure impact on the work for the day…"*

Participant B1:S.C.2

Interacting with colleagues is seen to have an effect on the work process;

> *"…Yes. The way interacting with my colleagues depends the work goes smoothly. My interaction is not with my colleagues it will affect the work…"*

Participant D1:S.C.2

Another participant included the quality of work within the team approach as an ongoing aspect of care in the context of interacting with colleagues;

> *"…Nursing is a team approach, it involves a continuous process. Mutual respect for one another is imperative for the success of achieving Quality Nursing Healthcare, and to not be afraid to ask for help when it's needed."*

Participant A1:S.C.2.

In the context of the question where participants said that interactions with colleagues did not have an impact on the day's assigned work;

> *"…The assignment is based on urgency to finish day work not on improving the work. I do my job the way I believe it has to be done most of the times. Despite of teamworkers attitudes…"*

Participant E1:S.C.2

The above response indicates that the participant focused on execution of tasks within the team and not necessarily as part of the team, while a different participant indicated that it was possible to continue working and resolve issues within the context of the working environment;

> *"…NO [respondents' writing] - I don't have any problems with my colleagues that we cannot resolve on the spot.…"*

Participant F1:S.C.2

4.7 SUMMARY

The findings show that the respondents see respect and communication as the most important factors in terms of interactions between the RN's. The responses to the open-ended statements guided the emphasis on respect and communication in response to the first open-ended question in 4.6.1 above, and added teamwork as a sub-theme in response to the second open-ended question in 4.6.2 above. The themes of respect, communication and the sub-theme teamwork from the open-ended questions were included amongst the factors in the section for closed-ended questions.

4.8 CONCLUSION

In this chapter the statistical analysis and the results from the data were presented, and discussed, from the information obtained from the questionnaire. The research question was answered in having established which factors underlie RN to RN interactions in the perioperative area.

The aim and objectives for the study were met to:

- describe the factors underlying RN to RN interactions in the perioperative area;
- explore the underlying factors in RN to RN interactions;
- establish if the interactions had an impact on assigned tasks

In chapter 5, conclusions relevant to the findings will be made relating to the study objectives. Limitations of the study will be described. Recommendations will be made that are based on the findings from this study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The aim of this research study was to explore and describe factors underlying registered nurse (RN) interactions in the perioperative area of a Middle Eastern tertiary healthcare centre. The parameters within which the study was undertaken were King's Conceptual System alongside the 2012 ICN Code of Ethics for Nurses, which provided a foundational base for the exploration of the factors.

The conclusions of the results reported in chapter 4, are presented and the limitations of this study are considered. Future research recommendations are suggested.

5.2 CONCLUSIONS

The conclusions of the study are presented and discussed according to the demographic and professional profiles and the objectives of the study.

5.2.1 Demographic and professional profile

The majority of the respondents were female, between 30 and 39 years old, and originated from several countries, with the greatest number of respondents coming from the Philippines. Respondents from India represented the second highest number of respondents, followed by South Africans. The remaining respondents came from Saudi Arabia, Jordan, Malaysia, Canada and Slovakia. All the respondents were registered in their own countries as well as in Saudi Arabia.

The average years of work experience since qualifying after their basic nursing training was fifteen. Their maturity (age) and years of work experience suggests that a high level of interpersonal skills should have been acquired. Registered nurses who have three to five years within the same working environment can be thought of as expert, skillful or competent (Benner, 2001:31). Included in the skills level is the ethical requirement of being able to interact, and collaborate with respect towards co-workers (ICN Code of Ethics, 2012:4).

5.2.2 Objectives of the study

The first objective set for this study was to explore and describe the factors underlying RN interactions in the perioperative area of a tertiary healthcare facility. The second objective was to establish if the interactions impact assigned tasks.

5.2.1.1 To explore and describe the factors underlying RN interactions

The factors of respect and communication were the most dominant in the outcomes of the study and the responses to the closed-ended statements were validated by the responses to the open-ended statements. Culture and conflict were less dominant.

5.2.1.1.1 Respect and Communication

The findings show that both respect (section 4.5.9) and communication (section 4.5.13) were seen as major factors for interacting with colleagues in the workplace. Respect was seen to be of value, with some uncertainty as to whether or not the colleagues respected each other. The open-ended questions indicated that the respondents consider respect to be a necessary factor in collegial interactions.

Communication is an element considered necessary for day to day functioning, and is perceived as being intrinsically necessary for teamwork and task management. Communication skills include compromise, cultural understanding, listening, attentiveness and perception (Scully & Dallas, 2005: 94, 96, 124).The study did not show whether or not communication is inherently good in the perioperative area, or whether good communication is desired in interactions.

Respect for the self-esteem of others, when communicating, with clear, assertive messages is an essential element of professional behavior (Scully & Dallas, 2005:94). Within the workplace a culture of respect should to be encouraged to improve the outcome of healthcare (Roussel, 2011:792).

i) Teamwork and task management

The respondents indicated that teamwork (section 4.5.17) and task management (4.5.18) are affected by their interactions with colleagues in both the statements and open-ended questions, in particular the levels of respect and within the teams. They indicated that they enjoyed teamwork, and there was an awareness of the impact of disagreements on patient outcomes. Healthy teamwork and professional task management to ensure good quality surgical care includes the ability to communicate and collaborate in a team. Components for healthy teamwork in the perioperative area are stated as; treating all team members with respect, encouraging professional clinical practice and task execution, together with a zero tolerance policy on abuse and disrespect, clear role definition, ongoing education, and accountability for practice (AORN:2009:np)

ii) Morale

The high level of neutral responses to the statements on morale (section 4.5.8) suggested that this important aspect of team interaction is absent in the study setting. Roussel (2011:124) purports that high morale is associated with teamwork, open communication, innovation, trust and organisational flexibility. Good morale is present when there is feedback on task performance, adequate resources to empower task execution, integrated problem solving, support, participation in goal setting and decision making as part of a team (Roussel, 2011:125).

iii) Conflict

The responses to Conflict (section 4.5.2) and the conflict handling styles namely, Avoiding (section 4.5.7), Compromising (section 4.5.6), Integrating (section 4.5.3), Obliging (section 4.5.4) and Dominating (section 4.5.5), were affected by a high frequency of neutral responses. The responses showed that there is conflict or argument with colleagues, but the extent could not be determined.

In spite of the neutral responses the indications from the respondents were that avoiding is not a preferred manner in which to deal with collegial difficulties. They indicated that they do not feel dominated and they perceive themselves to be obliging.

iv) Lateral Violence

Lateral violence (section 4.5.16) or negative behavior showed a high neutral response and the effect on the workplace could not be determined from the study. This suggests the possibility of pervasive conflict in the perioperative area that is under-reported by the respondents. In addition the Spearmans Rank test showed a correlation between work experience and lateral violence, which indicates that there is lateral violence within the perioperative area. Task conflict and interpersonal relationships are affected by conflict, and the skills required to manage conflict are important for collaborative relationships (Doughery & Larson, 2010:23).

v) Culture

The participants indicated that they enjoyed working with nursing colleagues from different cultures and nationalities. However, the high number of neutral responses indicated that the perception of working with different nationalities is more complex than perceived by the respondents. A challenge facing the nursing profession is the need to provide healthcare that is safe, competent and excellent, while respect is maintained for differing cultures, religions, beliefs, ethnicity and languages of both staff and patients (Roussel, 2011:789).

In conclusion, the most significant factors in interactions have been highlighted which are respect and communication, teamwork and task management. The neutral response option as a selection response option may have distorted the objectivity of the responses. The outcomes may have been affected regarding the factors being examined as subjective perceptions regarding their own behavior and that of their colleagues.

5.2.2.2 To establish if the interactions impact the assigned tasks.

The responses to the open-ended statement strongly suggested that interactions, either positive or negative had an impact on how the daily tasks are executed. This was supported in the response to the analysis of the factor task management, where daily task management, was managed more easily when there was cooperative teamwork.

5.3 RECOMMENDATIONS

Based on the findings, the following nursing practice recommendations are suggested, with the focus on individual and group interactions, teamwork and task management. Patient safety remains a primary concern as a healthy work environment sustains safe, good quality practice that protects patients against potential adverse events (McNamara, 2012:540)

5.3.1 Conduct Focused Guideline Development

It is recommended that a structure is developed to guide and reinforce acceptable behaviour for new and experienced RNs in the perioperative area.

With the support of strong and committed leadership, interactive focus groups could be convened for re-examining existing hospital policies with regard to acceptable conduct. A structure of zero tolerance for negative behavior, and what is deemed to be negative behavior should be formulated within the unit from these groups. These groups would benfit from guidance through current hospital policy, ethical practice requirements, and the AORN Positions Statement for a healthy work environment could be used as the foundation.

5.3.2 Team building

Group activities could involve: peer-to-peer review and journal clubs as an aspect of practice within the unit. Human resource practitioners could be recruited to examine of emotional intelligence in new job applicants and in the existing team. Emotional fatigue occurs in conflict situations. In stressful working environments, such as the perioperative area, burnout results in high attrition rates. One of the most important factors to avoid professional burnout is harmony in the working environment (Phaneuf, 2009:np).

5.3.3 Workshops and Education

Orientation programmes and ongoing in-service education to include conflict management workshops in order to increase the ability of nurses to recognise and resolve conflict effectively. Included are components such as methods to handle conflict, immediate conflict resolution skills, leadership skills, regular unit conflict assessments, and dissemination of assessments and outcomes related to conflict (Chipps *et al.,* 2013:491).

5.3.4 Recommendations for future research

5.3.4.1 Nursing Interaction Research

This study revealed the complexity of interactions amongst RNs in the perioperative area of a tertiary healthcare institution, and was not exhaustive. The focus on the different factor subscales would be useful in guiding future research in similar settings.

The researcher recommends that further research is needed to corroborate the findings from this study, and to examine the application of the findings in differing nursing environments, in different cadres of nurses and in other hospital departments or institutions.

5.3.4.2 Clinical Practice Research

Interactions with colleagues who are not registered nurses, for example surgeons or technicians were not examined alongside the RN interactions. The multi-layered facets of interactions with team members in the perioperative area are known to be stressful and demanding where teamwork is essential for patient safety.

5.3.5 Interactive nursing components

For the purposes of this study several interactive nursing components were not included, for feasibility purposes, namely, emotional intelligence, peer-to-peer review, journal club and cultural diversity.

The researcher recommends further study inclusive of these elements. Research could involve quantitative, qualitative and mixed method studies in all the above mentioned components.

5.4 STUDY LIMITATIONS

Burns and Grove (2007:37) say that limitations relate to the whole study, or elements, which may have an impact on the generalisability of the results.

The population was limited to 44 registered nurses who were working in the perioperative area of one tertiary healthcare center at the time of the research study.

A further limitation of this study is that construct validity measure were not conducted due to delays experienced in obtaining institutional approval to proceed with the study.

Lengthy consultation took place with the Internal Review Board and academic nursing experts in the nursing research department of the hospital. Numerous changes were made to the questionnaire in order to meet the requirements of the management of the hospital. Approval was eventually granted for the study to take place four week before the end of the researcher's employment contract.

5.5 CONCLUSION

Multiculturalism is intrinsic to all perioperative areas. The findings suggest that cultural competence seemed to be lacking. Cultural competence requires communication and respect as essential elements. The findings show that both communication and respect are noted as being necessary for cohesive teamwork and task management. A correlation between work experience and lateral violence was found and the findings suggest that lateral violence is a problem. The attitude of the participants towards each other showed a high number of non-committal responses and so could not be established accurately.

The impact on the quality of care and patient outcomes as a result of poor communication and lack of respect, within the context of the perioperative are is potentially profound, although this was not examined specifically in this study. The participants showed an understanding that good communication and respect are elements most needed for good collegial relationships, as well as being necessary elements for delivering good care.

The quality of communication relating to the interaction between nurses indicated that the respondents understood communication to be integral to behavior and teamwork and that it has an effect on others. The respondents also indicated that respect for others to be essential for the work process.

This was in contrast to the finding that there was a correlation between lateral violence and work experience, and the impression was highlighted by the ambivalent responses to the statements on attitude. In addition to this the responses to the statements on task management and teamwork suggest that there is a lack of team coherence. The inference

from these findings is that although there is an understanding that good communication is important, that the quality of communication is fractured in the perioperative area.

The value of this study is that it both described, and explored, the factors present in nursing interactions in the perioperative area of the tertiary healthcare centre. The value pertains not only to the area in which the study took place, but also contributes to the under-researched area of interactions between nurses. It provides a foundation for future studies and further research in the area of nurse to nurse interactions.

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APPENDICES

APPENDIX A: UNIVERSITY ETHICS APPROVAL

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot · your knowledge partner

Ethics Letter

26-Jun-2014

Ethics Reference #: S12/11/297
Title: Factors underlying registered nurse interactions in a multicultural tertiary care perioperative area.

Dear Ms Suzan HERBERT,

At a review panel meeting of the Health Research Ethics Committee that was held on 6 June 2014, the progress report for the abovementioned project has been approved and the study has been granted an extension for a period of one year from this date.

Please remember to submit progress reports in good time for annual renewal in the standard HREC format.

Approval Date: 6 June 2014 Expiry Date: 6 June 2015

If you have any queries or need further help, please contact the REC Office 0219389207.

Sincerely,

REC Coordinator
Mertrude Davids
Health Research Ethics Committee 2

APPENDIX B: HOSPITAL APPROVAL

MBC-J04 [redacted]

INTERNAL MEMORANDUM

TO : **SUZAN MARGARET HERBERT**
Principal Investigator, IRB 2013-20
[redacted]
Nursing Affairs

DATE: 16 Ramadan 1434
25 July 2013

REF.: RC-J 234-34

FROM : [redacted]MD
Chairman, Institutional Review Board (IRB)
Research Centre
KACST Registration # H-02-J-009 (dated 18/05/1433)

SUBJECT : **PROTOCOL APPROVAL**
IRB 2013-20: *Factors underlying registered nurse interactions in a multicultural tertiary care perioperative area*

Thank you for your response to the Board's queries on the above-mentioned research protocol. The changes made in the application form and the clarifications provided were considered satisfactory. I am pleased to inform you that scientific and ethical approval is granted and you may now start with the conduct of the protocol.

Please submit to us the first Biannual Progress Report or the Fnal Report, as the case may be, on or before **24 January 2014.**

Copies of the said forms are available at the Research Centre.

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Form 11100-14 (09-29) I.C. 82125001061 Printed by Reprographics KFSH&RC

APPENDIX C: HOSPITAL NURSING APPROVALS

OFFICE OF THE EXECUTIVE DIRECTOR
NURSING AFFAIRS
INTERNAL MEMORANDUM

MBC J-73 [redacted]

TO: **SUSAN MARGARET HERBERT** [redacted]
Nursing Affairs

DATE: 10 Shaban 1434
19 June 2013

FROM: [redacted]
Executive Director
Nursing Affairs

REF#: NA-J 1167-34

SUBJECT: **NURSING AFFAIRS' APPROVAL FOR RESEARCH**

Thank you for submitting your research proposal with the title '*Factors underlying registered nurse interactions in a multicultural tertiary care peri-operative area'.*

The proposal has been reviewed after suggested amendments. Attached the review of the Nurse Research Council with recommendations.

From a Nursing Affairs' perspective you have permission to submit to the Institutional Review Board (IRB). Please note IRB provides permission for all studies conducted in the hospital.

We wish you well with the study.

cc: [redacted] ogram Director, NPQR, Nursing Affairs
Program Director, General Services
Head Nurse, OR/RR

Form 11100-14 (09-29) I.C. 82125001061 Printed by Reprographics KFSH&RC

APPENDIX D: PARTICIPANT CONSENT FORM

PARTICIPANT INFORMATION LEAFLET AND CONSENT

TITLE OF THE RESEARCH PROJECT:

Factors underlying registered nurse interactions in a multicultural tertiary healthcare perioperative area.

REFERENCE NUMBER: **S12/11/297**

PRINCIPAL INVESTIGATOR: **SUZAN MARGARET HERBERT**

ADDRESS: *UNIVERSITY OF STELLENBOSCH, FACULTY OF HEALTH SCIENCES, DIVISION OF NURSING, P.O.BOX 19063, TYGERBERG, SOUTH AFRICA, 7505*

CONTACT NUMBER: **0027 21 938 9036 or 00966 54 202 1962**

Dear Colleague,

My name is ***Suzan Margaret Herbert***, and I am a Professional Registered Nurse.
I would like to invite you to participate in a research project that aims to investigate **factors underlying registered nurse interactions in a multicultural tertiary care perioperative area**.

Please take some time to read the information presented here, which will explain the details of this project and contact me if you require further explanation or clarification of any aspect of the study. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee (HREC) at Stellenbosch University** and will be conducted according to accepted and applicable National and International ethical guidelines and principles, including those of the international Declaration of Helsinki October 2008.

The study is to find out what factors are present between Registered Nurses in the perioperative area as they interact during the daily execution of tasks. The study is to find out what factors are present, as well as to establish whether or not there is any impact on the daily execution of tasks.

A questionnaire has been provided which will need to be completed in order to establish what factors are present in the daily interactions between Registered Nurses.
The questionnaire has been designed to be easy to complete, and your anonymity and confidentiality is assured. Please do not put your name on the questionnaire at all. There are no right or wrong answers.

For the purposes of the study however your consent is important, and is a legal requirement for me to be able to proceed with the study. The consent form is to be placed in the box marked "CONSENT FORMS", which has been provided for the purpose of consent forms only. The consent form may also be given to me, as the researcher, if you would like to do so. Please be assured that this will be kept confidential. No information regarding who has participated in the study will be disclosed.
A separate box has been provided for the completed questionnaires. An envelope has also been given to you, so that you can place the completed questionnaire in the box. Please be assured that no attempt to identify you will be made.
The completed questionnaires will be collected at the end of a three week period. The data obtained from them will be analysed by an expert statistician after collection.
Your participation and contribution will be highly appreciated and valued.

If you are willing to participate in this study please sign the attached Declaration of Consent. When you have done so, you can place it in the box that has been provided.

Yours sincerely

Suzan Margaret Herbert
Principal Investigator

Declaration by participant

By signing below, I _____

_____ ,

agree to take part in a research study entitled**;**

_____

_____

_____

_____

I declare that:

- I have read the attached information leaflet and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask statements and all my statements have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) : _____

On (*date*) : _____ 2013

_____

Signature of participant

APPENDIX E: QUESTIONNAIRE

INSTRUCTIONS:

- Please answer all the questions by marking your choice with a tick (√), e.g.:

  Are you a Nurse?

Yes	√
No	

- This questionnaire consists of 7 pages and will take approximately 20 minutes to complete.
- Place the completed questionnaire in the self-sealing envelope provided. Post it in the sealed "Questionnaires" box.

SECTION A: DEMOGRAPHIC AND PROFESSIONAL PROFILE	
NO.	**DEMOGRAPHIC INFORMATION**
1	What is your gender?
2	What is your age? (Write in the number) Years:
3	What is your country of origin?
4	Which country are you registered in?

5	How many years of experience do you have since qualifying? (Write in numbers)
6	Please indicate what your basic qualifications are by marking the box "yes" or "no"
7	Do you have a post-basic qualification in Operating Room Nursing? Please choose "yes" or "no"

QUALIFICATION	Yes	No
Degree		
Diploma		
Degree and diploma		

YES	
NO	

The next section (B) is to find out how you, as a Registered Nurse, interact with your colleagues. It is to establish what interactions are present between Registered Nurses in the daily execution of tasks. Please answer all the questions according to the 5 options provided.

SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
NO	**STATEMENT**	**5**	**4**	**3**	**2**	**1**
8	I understand interactions with my nursing colleagues to be the way in which we work together as a team.					
9	I like to discuss problems honestly with my nursing colleagues.					
10	I often give in to the needs and requests of my nursing colleagues.					
11	When I speak I am aware that my nursing colleagues will form an opinion of me					
12	There are times when I am not sure exactly what to say and I am unsure of how to relate to my nursing colleagues.					
13	I enjoy working in a team and would say that I am a team player					
14	My colleagues have not encouraged or given me the credit that I should have received, when I have done something well.					
15	There is a good collaborative atmosphere in the department.					
16	When it is important to show that I am right, I will argue with my nursing colleagues.					
17	If I am not sure of how to do something that is required, I will always ask my nursing colleagues, team leader or supervisor, so that I can carry out my duties efficiently.					

SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
18	If a decision is made that I don't like, I won't say so outwardly, but will not do what is required, or participate in the actions.					
19	Interactions with my nursing colleagues are the way in which we affect each other.					
20	My nursing colleagues are reliable, consistent and I can count on them at all times.					
21	If I don't want to do something that I don't like, even if it is part of my normal work, I don't say anything, but avoid the task and don't do it anyway.					
22	I am always aware of how my nursing colleagues or supervisors respond to me, or answer me, when I have conversations with them.					
23	I prefer to work with nursing colleagues from the same nationality as my own.					
24	My nursing colleagues sometimes argue with me					
25	I am highly motivated in my work and enjoy the work that I do.					
26	When an issue needs to be resolved I work with my nursing colleagues to find an answer.					
27	There are times when I want to say something positive, or I think I know what to say to my nursing colleagues, but I miss the opportunity because I can't find the words.					
28	There are times in conversation with my nursing colleagues, that I don't understand exactly what is being said.					

SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
29	My nursing colleagues tend to manipulate me at times, and this makes me feel as though I am not able to trust them.					
30	When my nursing colleagues speak to me, there are times when my mind wanders.					
31	When I disagree with my nursing colleagues or supervisor it has a negative effect on how I do my work.					
32	I find it stimulating and interesting that there are nursing colleagues from different cultures to work with.					
33	I make suggestions to sort out problems that are difficult to solve.					
34	It is important to me to do my work well.					
35	I sometimes argue with my nursing colleagues.					
36	My nursing colleagues will use their influence to make decisions that favour themselves and not consider others					
37	My nursing colleagues seem to enjoy the work that they do.					
38	There are times when my nursing colleagues and I have conversations, where I don't exactly see their purpose or intentions.					
39	If a solution is reached, or a decision is made that I don't agree with, I still follow the solution or decision that has been made					
40	I understand that my nursing colleagues that are from a different country to myself see things differently to me.					
41	I manage my daily work load more easily when I get on well with my nursing colleagues or supervisor.					

SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
42	I understand interactions with my nursing colleagues to be the way in which we communicate with each other.					
43	I have been deliberately misunderstood by my nursing colleagues at times.					
44	I understand teamwork to be collaborative, but it also allows me to work independently to contribute to the team.					
45	I am honest and open with information when there are problems that need solving					
46	I am adaptable and flexible with my nursing colleagues and supervisors.					
47	When my nursing colleagues get angry, it seems to be to try and dominate or control me, or the situation, and it makes me act negatively towards them.					
48	I always try to get along with my nursing colleagues.					
49	I understand being respectful towards my nursing colleagues, as being admiring of their knowledge, qualities and skills.					
50	When it is busy our nursing colleagues are willing to help each other without being asked.					
51	I find it difficult adjusting on a daily basis to how the unit runs when different cultures are in charge from day to day.					
52	I often do more than I need to, so that I can show consideration towards my nursing colleagues to ease their general workload.					
53	I communicate well, and am therefore easily able to get on well					

	with my nursing colleagues.					
SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
54	I understand interactions with my nursing colleagues to be how I behave when I am in the company of my nursing colleagues.					
55	I understand respect towards my nursing colleagues, as being considerate of their feelings and their rights.					
56	Sometimes I am not sure of how to respond to what my nursing colleagues are saying to me.					
57	I am sometimes rude to my nursing colleagues.					
58	I adapt to the needs and requests of my nursing colleagues.					
59	My senior nursing colleagues are supportive of me when there are difficulties, and I am able to resolve them.					
60	I enjoy sorting out problems even if there are differences of opinion.					
61	I have felt bullied at times by my nursing colleagues and this has affected the way that I am able to work with them.					
62	I like to find a neutral way to move past differences of opinion with my nursing colleagues.					
63	I enjoy integrating and collaborating with my nursing colleagues to make decisions that are satisfactory to all of us.					
64	I respect the opinions of my nursing colleagues, especially when they know more than I do about a subject or an issue.					
65	I prefer to “go with the flow” rather than face disagreements.					
66	When relating to my nursing colleagues I am confident and sure of what to say and do.					

SECTION B: INTERACTIONS WITH MY NURSING COLLEAGUES						
In this section, please choose only one option per statement by marking the appropriate column with a tick (√).						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
67	If there are problems or disagreements, I like discussion with my nursing colleagues so that we can come to an agreement.					
68	I prefer to do things that I know need to be done alone, even if others don't participate in the work that needs teamwork.					
69	I respect my nursing colleague's opinions and ways of working.					
70	When I have conversations with my nursing colleagues, I am very aware of what their behaviors mean with regard to the situation or me.					
71	When there are conversations with my nursing colleagues, I listen carefully to what is being said.					
72	I try to keep things pleasant with my nursing colleagues at all costs.					
73	My nursing colleagues are sometimes rude to me.					
74	I do not respect the knowledge of my nursing colleagues especially if they don't consider me in their decisions.					
75	My nursing colleagues respect me.					
76	I attempt to get along with my nursing colleagues and try to please them.					
77	My nursing colleagues talk about me behind my back.					
78	I am easily misunderstood by my nursing colleagues due to my coming from a different culture to them.					

SECTION C

In these questions, a written answer is all that is needed. There is no right or wrong answer. It is your opinion only.

1. What is/are the most important aspect/s, or factor/s, for you when you are interacting with your nursing colleagues?

_____

_____

_____

_____

_____

2. Does the way you interact with your nursing colleagues have an impact on the work you are assigned to do for the day?

YES or NO (Please circle your response), and WHY?

_____

_____

_____

_____

_____

Thank you for completing the questionnaire and for your participation in the study!

APPENDIX F: TURNITIN REPORT

- My home /
- My courses /
- Medicine and Health Sciences /
- Verpleegkunde /
- Research Methodology /
- Turnitin Assignments /
- Thesis submission (Second Year)
- My Submissions
- Part 1

Title	Start Date	Due Date	Post Date	Marks Available
Thesis submission (Second Year) (Part 1)	26 Aug 2014 - 15:16	1 Dec 2014 - 15:16	15 Nov 2014 - 15:16	100

Summary:

Students please find link for thesis submissions.

	Student	Submission Title	Paper ID	Submitted	Similarity	Grade			
	Herbert, Sm	thesis	458534605	26/11/14, 11:19	14%	--/100	Submit Paper		--

APPENDIX G: DECLARATION OF TECHNICAL FORMATTING

Lize Vorster Communication

To whom it may concern

This letter serves as confirmation that I, Lize Vorster, performed the technical formatting of Suzan Margaret Herbert's thesis. Technical formatting entails complying with the Stellenbosch University technical requirements.

Yours sincerely

Lize Vorster

Language Practitioner

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