

UNIVERSITY OF KWAZULU-NATAL

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SCHOOL OF NURSING AND PUBLIC HEALTH

EXPLORING PERCEPTIONS OF COURSEWORK MASTERS

STUDENTS REGARDING RESEARCH SUPERVISION PROCESS AT A

SELECTED, UNIVERSITY IN KWAZULU NATAL

A dissertation submitted in partial fulfilment of the requirements for the

award of Coursework Master's Degree in Nursing (Nursing Education)

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DECLARATION

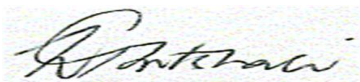
I, Claudine Muraraneza, declare that this research dissertation titled “Exploring perceptions of coursework masters students regarding research supervision process at a selected, university in KwaZulu-Natal” is my original work. All the resources and materials that have been used or quoted have been indicated and acknowledged by means of references.



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DEDICATION

This dissertation is dedicated to my parents, Anaclet KAMBANDA and Immaculée MUKAMULISI, for all your love, and education. You made me who I am today and will be in future.

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This dissertation was made possible through others. I am grateful to all of them. I would like to thank God for protection and blessing during this continuous academic journey. Jesus, you have never left me alone, thank you very much.

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ABSTRACT

Background: Research supervision process at postgraduate level is expected to transform research candidates into knowledge producers and managers, with research supervisors playing an informed supportive role in their research journey. More importantly, the dynamic and complex environment of today is demanding a change in conventional research supervision processes.

Purpose: The purpose of this study was to explore and describe perceptions of coursework masters students on research supervision process in a selected university, in Kwazulu-Natal.

Methodology: This study adopted a positivist paradigm and a quantitative, descriptive approach. Non-convenience sampling method was used to select participants. ere used in this study. Ethical clearance was obtained from the University Ethics Committee numbered HSS/0363/012M. Data was collected using an instrument with items adopted from a number of instruments. Test-retest reliability was done to establish the reliability of the instrument and the Cronbach's alpha test was above 7. Descriptive statistics were used to describe data from this study and inferential statistical methods were used to test relationship among variables.

Results: The findings revealed that participants (87.8%) had high level of expectations from the research process. The majority of respondents (83.25%) reflected satisfaction with resources available to support their research projects, with a mean of 3.33 out of 4. However, about half (53.5%) stated that financial support for their research projects was inadequate. The majority of participants (66.1%) perceived support from research supervisors at moderate level, and 32.1% perceived it as high, while 1.8% perceived it as low. Although positive, the majority of participants (67.8%) were less satisfied with the intellectual climate within the

school to support their research projects, with an overall mean of 2.712 out of 4. Computed total scores of outcomes of research supervision reflected that the majority of 71.4% perceived outcomes as high with 28.6% perceiving outcomes as moderate.

Recommendations: Although the findings were generally positive, data suggested the need to develop the research supervision capacity of some of the supervisors to improve the quality of service provided to students. Some participants suggested a need to use technology to support students as well as adoption of a cohort research supervision model considering that the school had a number of emerging research supervisors.

Keywords: postgraduate students, postgraduate research supervision, research supervisor

LIST OF ABBREVIATIONS

AACN:	American Association of College of Nursing
BNAP:	Bachelors of Nursing Advanced Practice
CHE:	Council for High Education
ICT:	Information Communication and Technology
LAN:	Local Area Connection
MA:	Moderately Agree
MD:	Moderately disagree
χ^2:	Chi-square
PhD:	Doctoral of philosophy
PRES:	Postgraduate Research Experience Survey
SA:	Strongly Agree
SA + MA:	Strongly Agree and Moderately Agree
SANC:	South Africa Nursing Council
SD:	Strongly Disagree
SPSS:	Statistical Package for the Social Sciences
Std. Dev.:	Standard deviation
UK:	United Kingdom
UNESCO:	United Nations Educational Scientific and Cultural Organization
UNISA:	University of South Africa
WHO:	World Health Organization

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

The coursework master's degree is becoming the principal conduit for delivering continuation of high education to professionals, and is one of research academic levels in higher education (Drennan and Clarke, 2009). Research stimulates creation of new knowledge and drives innovations in a discipline (University of Mauritius, 2009), and candidates entering into the field of research need to develop the necessary research skills to become effective scholars (Drennan and Clarke, 2009). According to Blass, Jasman and Shelley (2012), postgraduate students are regarded as the most important sources contributing to the development of knowledge. The quality of postgraduate research supervision is fundamental to train scholars in higher education institutions and to ensure that useful knowledge is being produced (Blass, Jasman and Shelley, 2012). Nevertheless, despite the extensive growth of coursework master's degree in professional disciplines, little is known about students' experiences of research or research supervision, which is a central component of the degree (Drennan and Clarke, 2009). To address this need, this study explores perceptions of coursework master's nursing students on research supervision. This chapter highlights the background of the study, problem statement, purpose of the study, objectives, research questions, operational definitions of terms, conceptual framework, outline of the study and the conclusion.

1.1 Background to the study

The emergence and growth of a knowledge-based economy and society, in which technological and scientific development play a key role, poses challenges to the universities, which are the major players in knowledge generation, mostly through postgraduate students (Blass et al., 2012, Byrne and Keefe, 2002, Zhao, 2003). Postgraduate research drives a nation's research and development and stimulates economic growth (Leru, 2007 cited in Abdullah and Evans, 2012, UNESCO, 2007). However, according to the United Nations Educational Scientific and Cultural Organization [UNESCO], cited in Sutz (2005), 71.6% of researchers are found in developed countries, which account for 22.3% of the worldwide population, while only 28.4% of researchers are in developing countries, which account for 77.7% of the total population. The research informs practice and should be strengthened (Frenk, Chen, Bhutta, Cohen, Crisp, Evans et al., 2010). While academic and industrial communities promote an increase in the quality and quantity of research output, this is particularly pressurising to both research supervisors and students (Picard, Wilkinson and Wirthensohn, 2011). Smith and Crookes (2011) point out that both university and government priorities dictate this direction.

The postgraduate research supervision process is expected to transform research candidates into knowledge producers and managers. Scholarship through postgraduate research supervision is an essential part of knowledge generation in higher education institutions (Picard et al., 2011). A significant goal of universities is the development of postgraduate students as competent knowledge generators and scholars, with research supervisors playing an informed supportive role in their research journey. Their main supervisory responsibility is to facilitate the students to become independent professional researchers and scholars in their

respective fields (Brockbank and McGill, 1998, Eley and Jennings, 2005), which is not an easy task.

According to Bitzer (2007), postgraduate research supervision requires complex academic and interpersonal skills, such as guiding the students toward sound proposal preparation, methodological choices and documenting and publishing their research, while at the same time maintaining both a supportive and professional relationship. Trudgett (2011) acknowledges that high quality supervision is strongly associated with the capacity of academic staff. However, very little guidance is provided on how to achieve the required quality of research supervision (Picard et al., 2011). Just as teacher requires training to become effective in the classroom, research supervisors need training to be competent in research supervision. Hence, there is a need to prepare research supervisors for this role.

Formal training for the scholarship development of research supervisors is available in countries such as the United Kingdom, Australia, and Canada. This has been well documented in literature by different authors who have recognized the valuable input of research supervisors, which impacts positively on the quality of knowledge production and publishable research in developed countries (National League for Nursing, 2005, Remenyi and Money, 2004). In Australia, research supervisors are formally trained on both the process of research supervision and the final product, with an emphasis on delivering a high quality of education (Remenyi and Money, 2004).

In a national study conducted by the Higher Education Academy in the UK on postgraduate research experiences, 87.5% of the respondents believed that their supervisors had the skills and subject knowledge to adequately support their research (Hodsdon and Buckley, 2011). Similar results were found in the University of Sydney, Australia, among postgraduate students in the faculty of Health Sciences (n=213), where 83% of respondents were satisfied

with the quality of the supervision they had received (University of Sydney, 2010). These statistics show that a large proportion of postgraduate students are generally satisfied with the guidance they obtained from their research supervisors.

However, in a study conducted at Macquarie University in Australia within the Department of Indigenous Studies (n=55), the data indicated that only 27.3% of the students believed that their supervisors had been most supportive (Trudgett, 2011). In the University of South Africa [UNISA], Lessing & Schulze (2003) found that only 47% (n=53) of masters students referred to their supervisors acknowledgeable people for consultation. These contradictory results might be due to the research supervisors not having been specifically prepared for their role. Some research supervisors merely unreflectively correct grammatical errors and insert their preferred choice of words into a candidate's text to ensure a nicely expressed document (Cadman and Cargill, 2007 cited in Picard et al., 2011), which is insufficient to what is expected of supervisors at postgraduate level. At masters level, postgraduate students are expected to be able to demonstrate specialist knowledge, with engagement and critique of current research, and to acquire an advanced scholarship in a given discipline (South African Qualifications Authority, 2010). For Pillay and Balfour (2011), a research supervisor should be a specialist in the field of study and focus more on the methodology of the research and less on the style.

Hence, postgraduate students need more assistance at the beginning of their research by proper induction when they are working on the proposal. Picard et al. (2011) argue that the research supervisor should not assume that students are already autonomous at the beginning, but understand that they need explicit, scaffolded learning opportunities in order to develop the high levels of autonomy that are expected of them. To achieve this, in addition to applying their academic and research skills, postgraduate supervision requires supervisors to assume different roles in order to facilitate postgraduate students' progression from novice to

experienced researchers (Lessing, 2011). According to Woolhouse (2002), supervisors in the UK have agreed to be supportive, facilitators, sounding boards and general advisors.

However, in a study conducted at UNISA by Lessing (2011) among academic research supervisors (n=50), the findings reflect supervisors' unwillingness to take responsibility for the students' research projects. Apart from senior lecturers, the majority of respondents (88%) viewed the selection of the research problem as the role of the students, and 93.2% indicated that it was not their role to check that students were on track and constantly working. This stance is probably due to their lack of skills and/or preparation in their supervisory role as junior lecturers. According to Samuel (2012), the limited capacity of supervisory skills is one of the contextual factors in South Africa which hinder postgraduate students in continuation of a research career.

While postgraduate students are expected to have a certain amount of research experience from previous qualifications, the advanced research skills required at this level of study should be acquired through the facilitation of their research supervisors. As cited in Noddings (1995), Dewey believed that to be educative, an experience has to build on prior experience and teachers must start where the students are in order to move forward. Nevertheless, from research supervisors' perspective, it is well documented in literature that many postgraduate students have insufficient knowledge of research methods due to inadequate preparation of their previous qualification (Millberg, Berg, Lindström, Petzäll and Öhlén, 2011, Singh, 2011). In their study conducted at UNISA, Lessing and Schulze (2003) found that among 75 masters students, 29% ,who had received previous training, felt that this training had prepared them adequately for their master's studies while a third of them had had no previous training in research methods.

It is evident that the number of postgraduate students in higher education institutions is increasing. For example, the increase rate of postgraduate students was 4% in Ghana, 7% in Nigeria, and 15% in South Africa by the year 2007 (Tettey, 2010). In the University of KwaZulu-Natal, the postgraduate student enrolments increased by 13% from 2000 to 2005 (Tettey, 2010). Throughout South Africa, there was a significant increase in enrolment of students from previously disadvantaged backgrounds from 1.2% to 26.6 between 1988 and 1998 (Cooper and Subotzky, 2001 cited in Mugarura and Mtshali, 2010). According to Malan, Marnewich, and Lourens ,2010 cited in Van Biljon and De Kock (2011), students from disadvantaged backgrounds are underprepared for tertiary education including research methodology knowledge and research skills.

The growth in academic staff has, however, not been proportional to the growth in the student numbers. This phenomenon has been noticed in New Zealand (Gerristen, 2008; Sampson and Comer, 2010 cited in McCallin and Nayar, 2012). In the University of KwaZulu-Natal, it was found that academic staff holding doctorate degrees decreased from 40% to 31%, and those holding masters degrees decreased from 29% to 27% between 2001 and 2006 (Tettey, 2010). Furthermore, research supervisors, who are already busy, have to put in much more time to assist underprepared students. This puts an extra burden on academic staff, as according to Dewey cited in Noddings (1995), to be educative, teachers must start where the students are in order to move forward. Hence, the universities face various challenges with respect to research supervisors, which affect the quality of research supervision provided to postgraduate students.

The method of research supervision most commonly used in South Africa is the traditional method, known as one-on-one research supervision, the single supervision model or face to face supervision. In this model, one postgraduate student is allocated one supervisor to assist with their research project (CHE, 2007, Lekalakala-Mokgele, 2008, Picard et al., 2011).

However, this traditional model is failing in the era of globalisation due to advanced technology, the increasing number of postgraduate students, most of whom are full-time employed and part-time at university, high mobility of research supervisors due to work-related demands, and visibility expected from academics for promotion purposes (Zhao, 2003). In addition, one of the dangers of the one-on-one supervision model is that if the research supervisor has limited research skills, there is a risk to the ill-equipped postgraduate student in the an output of the research journey (Bitzer, 2012), thus decreasing motivation of scholarship development.

However, developmental trends have initiated different models of research supervision to suit the current dynamic environment. In their study, De Beer and Mason (2009) found that online research supervision, known as a blended approach to research supervision, improves the supervision process. These authors argue that it reduces the administrative workload of the supervisor and creates a dynamic record of supervision. However, challenges associated with online postgraduate supervision have been identified by different authors. It requires full access to the internet for both students and supervisors. There is also a lack of knowledge concerning its practice and reduced understanding of the online research supervision process (Joyes, 2002, Loureiro, Huet, Baptista and Casanova, 2010). Lack of prompt feedback, communication breakdowns, ambiguous instructions, technical difficulties, isolation and time management, due to multiple responsibilities, are also difficulties reported by Van Biljon and De Kock (2011). Furthermore, it cannot be assumed that all postgraduate research students have access to or can use the required technology (Picard et al., 2011). In South Africa, it has been found that postgraduate students have meager computer and information literacy skills, where only 36% of tested students were able to confidently use an electronic tool for a specific context (Blignaut and Els, 2010).

The above challenges result in unethical relationships, where students have reported disputes with the supervisors, lack of supervisor expertise, long waiting periods for feedback and change of supervisors during the course of their studies (Singh, 2011). Students have also reported irregular contact when supervisors are busy with administrative or teaching responsibilities, have too many students or are away from the university too often (Ismail, Abiddin and Hassan, 2011, Singh, 2011). Consequently, there have been increased conflicts, late completions and high dropout rates (Marie de Beer and Mason, 2009), with some students preferring to alter the course of their studies by rejecting the research project and transforming their degrees into certificates by completing related modules. Although there might well be a mismatch in style related to gender, class, ethnicity, and learning approaches (Wisker, Robinson and Shacham, 2007), if there is no support given to research students, there will be no future development of the researching population (Blass et al., 2012), which will have a negative effect on the economy of the country.

The intellectual climate also affects success of postgraduate research students. A conducive environment in school, which promotes research culture leads to scholarship development for both postgraduate students and research supervisors (Byrne and Keefe, 2002, Peralta and Raju, 2012). Nevertheless, the fragmentation is becoming increased among postgraduate students, academic staff, administrators and managers (Rowland, 2002) due to obsession with accountability, standardisation and managerial control in competitive society (CHE, 2007). As consequence, the intellectual climate has been scored lower than other areas of postgraduate research supervision (Australian National University, 2012). In a survey conducted by University of Sydney among postgraduate students in faculty of Health Sciences (n= 213), only 40% agreed that they were integrated into their departments/schools (University of Sydney, 2010). Higher Education Academy found that 58.2% agree that there was an ambience in their department which stimulates their work (Hodsdon and Buckley, 2011).

The issue of resources constitutes a challenge to the success of postgraduate research. This is a common problem in developing countries and challenges postgraduate education. In Philippines, most universities reported insufficient journal subscriptions to support staff and students adequately in their research (Calma, 2011). At Deakin University, in Australia, 51.1% ($n=1200$) of postgraduate students agreed that there was adequate provision of computing resources and facilities (Abdullah and Evans, 2012). Further, it is reported that despite subscription to academic online database by universities, many postgraduate students prefer to use free online resources such as Google and Wikipedia (Green, Segrott, Priest, Rout, McIvor, Douglas et al., 2007). The problem of finance could hinder the progression of postgraduate students in their research journey. Hodsdon and Buckley (2011) found that 57.4% of their respondents had appropriate financial support for research activities and Abdullah and Evans (2012) found 50.4% had available financial resources. Research supervisors should make sure of available resources.

The outcomes of the research process at masters level not only include the production and communication of new knowledge, but also the development of research skills, motivation of candidates toward further research and utilization of research findings in their practice. Dewey, cited in Noddings (1995), asserts that an experience is educative only if it produces growth and leaves the student more capable or interested in engagement of new experiences.

Postgraduate research supervision has been given little importance by nursing scholars worldwide. Thompson et al. (2005) argue that in view of the limited availability of resources and expertise, academic departments of nursing need to give more attention to the relatively neglected activity of research supervision. Hence, the preparation of nurse educators to supervise postgraduate students is still a challenge in many countries. In Canada, the National League for Nurses (2005) has research supervision as one of the competencies expected from

Nurse Educators, which means their nursing education competency-based curricula should prepare the nurse educators for the research supervision role.

However, the curriculum of health professionals is static and outdated in many countries of the world (Frenk et al., 2010). Until now, the South Africa Nursing Council [SANC] does not include training of Nurse Educators on research supervision. SANC Regulation 118 mainly focuses on teaching, learning, assessment of learning, curriculum development and college administration. Furthermore, the introduction of the new nursing qualifications requires a research project both at diploma and degree level (SANC, 2010), meaning that all nurse educators will be expected to do research supervision. So far, Nurse Educators have been learning to supervise research through trial and error, and/or by informal training, such as workshops. This gap in the training of nurse educators may result in a low input and output in the research supervision process, which in return decreases the nature of support, guidance and facilitation provided to the postgraduate nursing students.

The transformation of nursing education leading to higher education has resulted in nurse educators having to cope with the university environment, which many have found challenging. It has been reported that many nurse educators are dropping out due to stress and high expectations, such as teaching and publications (Berlin and Sechrist, 2002, Schumacher, Risco and Conway, 2008). This means that they are expected to supervise postgraduate projects, a role which is sometimes beyond their capacity and increases their workload, in addition to striking a balance between work and family responsibilities. Some of them are under pressure from the universities to upgrade their qualification level to a doctorate to become an appropriately qualified member of the academic staff. All these challenges affect the quality of research supervision in the nursing discipline. However, the problem is compounded by nurse educators having to supervise large numbers of students who are underprepared in research methods. This has been highlighted by Lekalakala-Mokgele

(2008), who noted an increase in postgraduate nursing students within university in South Africa, mostly from disadvantaged backgrounds, who lack sufficient experience in research.

Quality of research supervision leads to timely completion and students' satisfaction, and involves explicit pedagogy and effective communication (Picard et al., 2011). Despite the continued growth in nursing students worldwide, there is little evidence regarding students' experiences of research supervision (Drennan, 2008). Too often, little thought has been given to the aspect of research supervision, with the result that far too many students fail to complete their degrees, with many dropping out at an early stage due to the problems related to research and the supervision process (Ismail et al., 2011, Thompson et al., 2005). This phenomenon was noted in the Department of Health Sciences of the University of KwaZulu-Natal (comprised of the School of Nursing and Public Health). Between 2000 and 2006, the average dropout at masters level for thesis-based coursework was 56%, while the completion rate for master's and doctorate students was on average about 11% and 10% respectively (Tettey, 2010). Mugarura and Mtshali (2010) insist that quality research supervision is critical because it impacts on the throughput rates at postgraduate level, especially in South Africa where there is as a concern about throughput rates.

1.2 Problem statement

Literature reflects inadequate numbers of suitably qualified and experienced research supervisors and rapidly increasing numbers of postgraduate students, many of whom are under-prepared in research from their previous qualifications (Lekalakala-Mokgele, 2008, Marie de Beer and Mason, 2009, Singh, 2011). This leaves most nurse educators, as research supervisors, struggling in the process of mentoring students and being confronted with uncertainty and confusion, which they are sometimes unable to share with their colleagues (Lekalakala-Mokgele, 2008, Mugarura and Mtshali, 2010, Thompson et al., 2005).

There are fewer graduates at the College of Nursing than the expected norms. It was found that between 2000 and 2006, the average of dropout for a thesis at masters level was 56%, while in the Faculty of Health Sciences at the University of KwaZulu-Natal, the completion rate for master's and doctorate students was averaged about 11% and 10% respectively (Tettey, 2010). In their study, Mugarura and Mtshali (2010) identified postgraduate research supervision as a major concern impacting negatively on the throughput rates at postgraduate level in the School of Nursing. Furthermore, little is known about postgraduate research supervision in the discipline of nursing. Hence there is a need for exploring postgraduate students' perceptions on research supervision in the discipline of nursing.

1.3 Purpose of the study

The study aims to explore and describe perceptions of coursework masters nursing students on research supervision in order to make recommendations to the research supervision process in the discipline of nursing.

1.4 Objectives of the study

- To describe perceptions on expectations of coursework masters nursing students to research supervision process.
- To explore the relationship between characteristics of coursework masters nursing students and the perceived nature of support from research supervisors.
- To describe support expected from the institution by coursework masters nursing students during the research supervision process.
- To explore the relationship between academic characteristics of coursework masters nursing students with perceived output from research supervision.

1.5 Research questions

- What are the perceptions on expectations of coursework masters nursing students in their research project?
- What is the relationship between the characteristics of coursework masters nursing students with the perceived nature of support from research supervisors?
- How do coursework masters nursing students perceive available material resources and intellectual climate to support their research?
- What is the relationship between the academic characteristics of masters nursing students and the perceived output from research supervision?

1.6 The rationale and significance of the study

1.6.1 The rationale of the study

In the literature, there is a little information on postgraduate perceptions on the process of research supervision in the discipline of nursing. In many countries of the world, the curriculum of health professional education is static and outdated (Frenk et al., 2010). An example is that SANC did not include the competence of research supervision in curriculum of nurse educators while they are expected to do it. Furthermore, in South Africa, there is a concern about the low rate of graduates among postgraduate students, despite their increased enrolment (CHE, 2007). In the university where this study took place, the institution is a research led university and the research accounts for 50% of all credits in the coursework masters program (College of Health Sciences, 2012). However, a high dropout rate (56%) of thesis based at master's level has been reported in the Faculty of Health Sciences, which incorporates the School of Nursing and Public Health. A study which explores students' perceptions on research supervision could provide information necessary to improving the quality of postgraduate research supervision and to inform nurse educator curricular.

1.6.2 The significance of the study

In Nursing Education

This study will inform the research supervision input, process and output from the perspective of coursework masters nursing students. The findings inform various stakeholders engaged in curriculum development for Nurse Educators, including nursing students, Nurse Educators, nursing education institutions and funding agencies to focus their effort towards formal training of nurse educators on research supervision. Such training should be used by research supervisors to improve their practice. It will also assist nursing education administration to plan strategies aimed to improve the quality of research supervision among postgraduate nursing students.

In Nursing Practice

The improvement of postgraduate research supervision will result in the production of useful knowledge, which serves as evidence based practice in nursing practice, to improve care of patients and community members.

In Nursing Research

The results and recommendations from this study will serve as baseline data for further studies related to postgraduate research supervision in the discipline of nursing.

In the Nursing Profession

The findings from this study will increase the body of knowledge on postgraduate research supervision within the discipline of nursing. Therefore, this study will promote growth of the nursing profession.

1.7 Operational definitions of terms

1.7.1 Perceptions

Perceptions are a way of regarding, understanding, interpreting, experiencing, conceptualizing or viewing something (Pearsall, Bailey, & Elliot, 1999 cited in Mulenga and Bhengu, 2009). In this study, perceptions mean a way of understanding and experiencing research supervision by coursework masters nursing students in terms of their input to research supervision, the support they have experienced from nurse educators and the institution during the research supervision process, and their views of growth as an outcome of research supervision.

1.7.2 Coursework masters nursing student

A coursework masters nursing student is a postgraduate student undertaking the master program in nursing aimed to increase the breadth and depth of professional practice, which involves a number of taught modules of specialisation and a minor research project (University of Kwazulu Natal, 2009). In this study, the term coursework masters student will be used synonymously with postgraduate student. A postgraduate student is a student who has attained a bachelor's degree or equivalent and is now studying for a qualification at a high level (The UK Quality Assurance Agency for Higher Education, 2011).

1.7.3 Research supervisor

A research supervisor is an academic member who is allocated to supervise a postgraduate students (Lekalakala-Mokgele, 2008). In context of this study, this term is used synonymously with a Nurse Educator. Bruce, Klopper, and Mellish (2011) define a nurse educator as a major role-player in personal, professional and academic development of nursing students, including scholarship development of postgraduate nursing students.

1.7.4 Postgraduate research supervision

Postgraduate research supervision is a dynamic process and a journey of growth and empowerment by which a nurse educator guides and oversees a postgraduate nursing student in order to do a research project of high quality and gradually master appropriate discipline research knowledge (Lessing, 2011).

1.7.5 Nature of support

Nature of support is defined as facilitation of a student's integration, acceptance and satisfaction in order to promote interest in learning for achievement of the goal (Trach and Ritterbush, 2006). In this study it means facilitation of coursework masters nursing students' integration in research culture by nurse educators and the institution to become an independent researcher.

1.7.6 Intellectual climate

The intellectual climate is defined as an environment facilitating a postgraduate nursing student to seek out knowledge purposefully and freely, engage in dialogue, and exchange of ideas actively and of their own volition, which require institutional support and social acceptance (Peralta and Raju, 2012).

1.7.7 Academic characteristics

In the current study, academic characteristics mean the period a coursework masters student spent under research supervision, the state of being part time or full time students, national or international student, previous qualification to masters degree, and specialisation in nursing at masters level.

1.7.8 Perceived output

In this study, the perceived output means the knowledge, attitudes, and skills acquired through the research supervision process by coursework masters nursing student.

1.8 Conceptual framework

The goal of research supervision is achievement of quality and completion of the students' research projects, which requires effective integration of knowledge management into the process (Zhao, 2003). Rowley (2000), cited in Zhao (2003), defined knowledge management as being concerned with the exploitation and development of the knowledge assets of an organisation with the view to furthering the organisation's objectives. Management entails all of those processes associated with the identification, sharing and creation of knowledge.

1.8.1 Input

The inputs are a combination of the postgraduate students' characteristics, raw material to be used, knowledge of products and services to be delivered as well as data information on knowledge (Zhao, 2003). In this study, the characteristics of the postgraduate students include age, gender, period of working with research supervisor, mode of attendance, status within the university, previous qualification, and current specialisation. These characteristics can influence the process and the output of research supervision process.

1.8.2 Process

The knowledge conversion process is seen as one of knowledge creation, transferring and sharing, and also a process of knowledge access improvement, which requires a conducive environment to develop (Zhao, 2003).

Simply, a Nurse Educator serves as an advisor, while the coursework masters nursing student is a self-directed learner. This process of knowledge management is not a one-stop process,

but a spiral cycle of continuous improvement and development and the output of the cycle may be supplied as inputs for the next transformation process (Zhao, 2003).

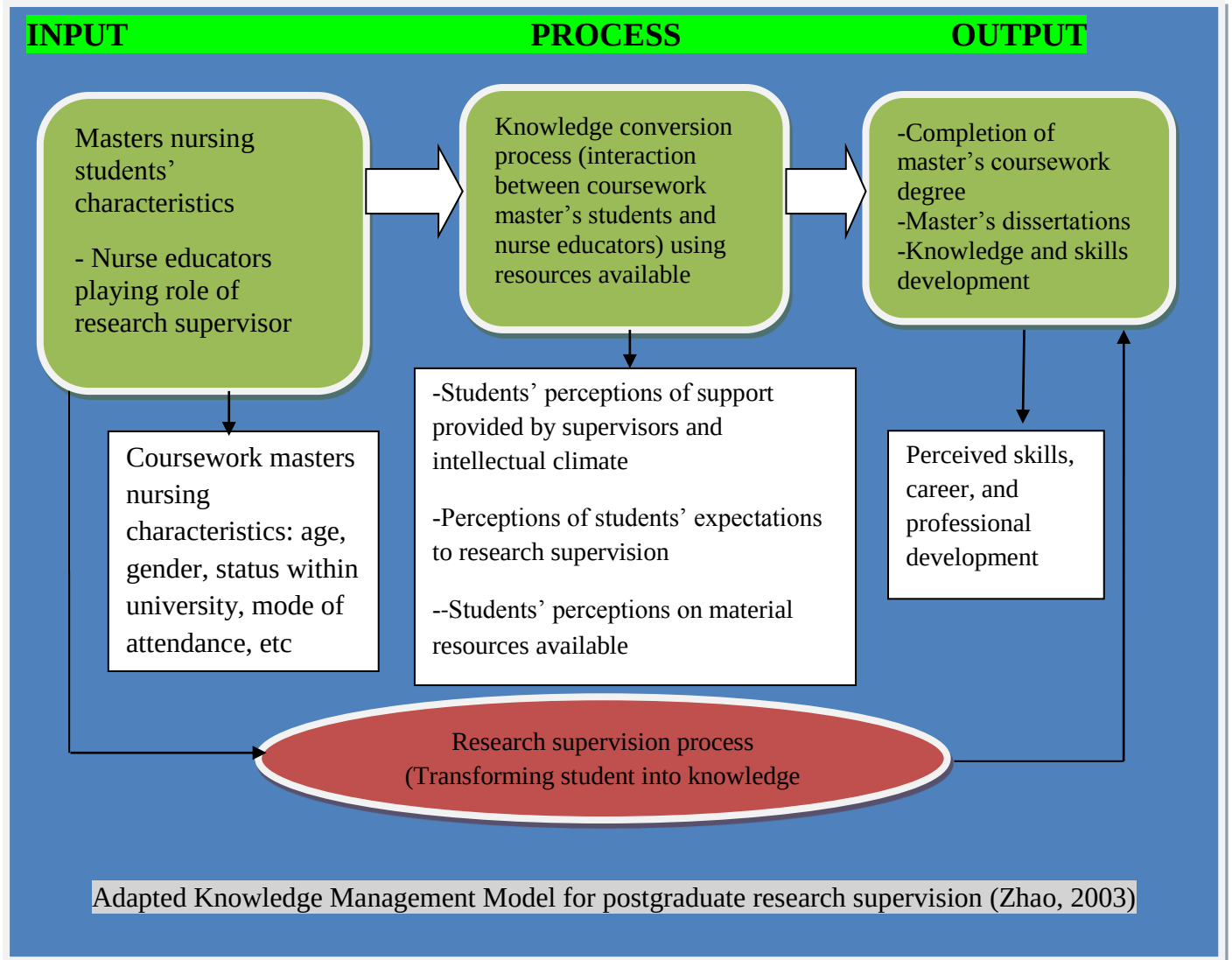


Figure 1: Knowledge Management Model

At the beginning, the origination and ownership of a topic lies firmly with the students to take the project forward in a vigorous and intellectually engaged matter (Anderson, Day and McLaughlin, 2006). The same authors argued that supervisors must ensure that the objectives, proposed methods and implementation of project are appropriately in alignment

with the research topic. Then, supervisors progressively reduce their active role in the decision making processes as the student gains experience and confidence in their capacity as a researcher (Todd, Smith and Bannister, 2006). Thus, the working relationship between coursework masters nursing students and their supervisors is a key to a successful supervision process and degree completion rate (Unsworth, Turner, Williams and Piccin-Houle, 2010). The research supervisors should be able to support student researchers in the advancement of scientific knowledge through creative effective learning and entail opportunities to conduct research projects with students that enhance their own learning, research and reputation (Zhao, 2003).

1.8.3 Output

The final component of the conceptual framework is the outcome. The outcomes of this study relate to the changes that occur in postgraduate students as a consequence of their research journey. The heart of research supervision lies more with helping students to critically manage knowledge, identify and exploit existing knowledge and create and utilise new knowledge, rather than simply providing students with academic research skills and a toolbox of research techniques (Zhao, 2003). Thus, the coursework masters nursing students become qualified researchers who successfully complete their degree by producing research outcomes with potential value to the knowledge-based society.

Students with high efficacy are better at monitoring their time, and better at solving problems than students of equal ability but with low efficacy (Zimmerman, 1995 cited in Schulze, 2011). Therefore, some students complete their research project in expected time, while others spend long time than the expected time.

1.9 The outline of the study

Chapter one

This chapter provides the introduction to the study. It presents the background, the problem statement, aim, objectives, and research questions, significance of the study, definition of terms, conceptual framework and the outline of the study.

Chapter two

Chapter two presents the reviewed empirical literature, which are organised in subheadings in relation to research supervision

Chapter Three

This chapter presents the research methodology that was followed in executing this study.

Chapter four

Chapter four presents, analyse, and interprets the numerical data from the study.

Chapter five

Chapter five presents the discussion of the data, limitations, recommendations and conclusion ends this dissertation.

1.10 Conclusion

The aim of this chapter was to provide an introduction to research supervision. The background to the problem of research supervision was presented referring to international, national and local situations. Generally, postgraduate research supervision is underdeveloped. Due an increased awareness of the concept, ‘knowledge based economy’, governments are putting pressure on universities, as major players of knowledge producers through postgraduate students, to generate knowledge by improving the quality of research

supervision. However, little guidance is provided on how this can be achieved, which is a challenge to research supervisors at postgraduate level. Despite proliferation of the coursework masters program in nursing, research supervision has been given little attention by nursing departments in higher education institutions. Insufficient or lack of preparation of research supervisors may explain the low input of nurse educators in research supervision, especially at master's level, where students are expected to develop advanced scholarship in nursing. The purpose of the study is to explore perceptions of coursework masters nursing students on research supervision in order to inform research supervision in nursing. The objectives and research questions have been developed and the rational and significance of the study have been discussed. Operational terms have been defined, the conceptual framework has been explained and the outline of the study has been shown.

The next chapter explores the literature with respect to research supervision.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews some of the current literature with respect to the phenomenon of research supervision. The search terms research supervision, coursework masters students, postgraduate students, learning theories, scholarship development and masters dissertation were used to search for literature in the on-line databases of Academic search complete via Ebscohost, South Africa e-publications via SABINET, Science Direct, Academic research library via ProQuest, Web of knowledge and Wiley online library. The books used were found in library of University of KwaZulu-Natal through ILINK OPAC.

There is a wealth of information on a theoretical basis of research supervision of postgraduate students in general, and PhD programs specifically, but little information is available concerning the research supervision at master's level. Despite the proliferation of masters courses that are being taught, the research experiences of masters students, in general, have received comparatively little attention within the research literature, and the dissertation process, in particular, has not been investigated extensively (Anderson, Day and McLaughlin, 2008).

The literature review is presented under different subtitles. The philosophical and theoretical basis underpinning research supervision is discussed, the existing different models (ways) of research supervision applied to master's level are described. The role of different stakeholders in research supervision, such as research students, research supervisors and higher education institutions are outlined. The relationship between student researcher and

research supervisor is discussed, and the output of research supervision, such academic and research skills, scholarship development, professional development and dissertation of a master's degree are also described. The chapter ends with a conclusion.

2.1 Philosophical and theoretical basis for research supervision

Today, professionalism and development require a strong command and application of learning theories for effective practices in education. Academic staff playing the role of research supervisors should understand philosophical assumptions and theoretical perspectives characterising instructional frameworks from previous academics and theorists (Yilmaz, 2011). Four learning theories are described with regard to postgraduate research supervision and these include the cognitive learning theory, social learning theories, the constructivism learning theory, and the connectivism learning theory.

2.1.1 Cognitive learning theory

The cognitive learning theory is a relatively recent learning theory and can be traced back to the early twentieth century. It supports a student-centred approach to learning as opposed to behaviorism, which fails to explain why and how individuals make sense of and process information (Yilmaz, 2011). Bruce et al. (2011) maintain that educational theorists following the cognitive approach direct themselves specifically toward the way in which learning occurs and the development of thinking. Inquiry learning, discovery learning and problem based learning are the most distinctive methods of the cognitive perspective (Yilmaz, 2011). Therefore, the theory supports postgraduate research supervision, which facilitates students in their quest to discover or provide scientific information on the problem under study and make valid recommendations to find solutions for the problem.

Ausubel (1963), cited in Bruce et al. (2011), describe the cognitive structure of an individual as the stability, lucidity and organization of knowledge in a given discipline that the individual already commands. For this reason, the cognitive learning theory focuses on making knowledge meaningful and helping students organize and relate new information to prior knowledge in memory (Yilmaz, 2011). According to Bruce et al. (2011), the individual's existing cognitive structure is the most important feature that constructs meaningful learning, retention, and transfer. Cognitivists view learning as an active process and the learner as an active participant in the process (Yilmaz, 2011) and this is what takes place under the guidance of research supervision. The role of research supervisors is only to facilitate postgraduate students during the process of organising the body of knowledge and making it available. The role of the research supervisor is to observe students carrying out a task and offer hints, feedback, reminders and new tasks aimed to bring their performance closer to expert (Brockbank and McGill, 1998).

Bruner, as cited in Bruce et al. (2011) believed that with the motivation and encouragement of the research supervisor, students should be actively involved in discovering for themselves in order to obtain knowledge largely on their own (Bruce et al, 2011). During the research process, the postgraduate students are encouraged to externalize their own learning, where they can gain conscious access to, and control of, their own problem solving strategies by articulating and reflecting on their knowledge, reasoning or problem solving by exploring new avenues of interest to themselves (Brockbank and McGill, 1998).

Interest in the welfare of students promotes learning. Therefore, during research supervision, a good research supervisor develops a feeling for the student's emotional needs, social background, and cognitive development (Fontana, 1972, cited in Quinn and Hughes, 2007). This is pertinent to nursing education where nurse educators, playing the role of research

supervisors, must be adaptable to meet the diverse characteristics of nursing students working on research projects, such a variety of backgrounds, cultures and age groups.

The teaching methods applied by using the cognitive learning theory are well explained by Yilmaz, (2011) and should be recommended to postgraduate research supervisors.

Cognitive apprenticeship is a method of helping students to grasp procedures under the guidance of an expert, such as a research supervisor (Yilmaz, 2011). A research supervisor first models how to perform a cognitive task by thinking aloud, and then the teacher watches, coaches and provides scaffolding until he/she turns over more and more responsibility to the student (Grabinger and Dunlap, 1995). This basic principle lies in Vygotsky's work, whereby the zone of proxy development follows instructional phases named modeling, coaching, articulation, reflection and exploration.

Reciprocal teaching is another method used in cognitive learning theory. Pioneers of this method, Palincsar and Brown, in 1986 cited in Yilmaz (2011) defined it as an instructional activity in the form of dialogue happening between teacher and students through modeling, coaching, scaffolding, and fading, to achieve instructional objective This method is often applied in postgraduate research supervision where both supervisor and student are initially engaged in learning on the particular topic under the study, and then scaffolding is applied in order to allow the student to become an independent researcher.

Inquiry learning grows out of Piaget's theory of cognitive development. The primary goal is to help students develop higher order thinking skills by engaging them in a process of discovery. The inquiry process has several steps, such as actively identifying a topic or issue, generating a researchable question, investigating the problem by undertaking relevant research, critically thinking about the issue, answering questions, drawing conclusions and reflecting on the inquiry process (Vajoczki, 2010). The same author mentioned that the

outcome of this process is self-directed learning, skills development on reflection of new knowledge, and deep understanding. Therefore, according to this process, research supervisors are expected to play a facilitating role, rather than doing the work for the postgraduate student.

According to Biggs, 2003, cited in Wilkinson (2011), learning is the result of the perceptions and inputs of both student and research supervisor, as well as the context in which the teaching takes place. As there is a need for background knowledge in research methodology, postgraduate students engaged in research should open themselves to the valuable input of the research supervisors while carrying out a research project. Aluko and Fraser, 2008 cited in Van Biljon and De Kock (2011) stated that technological progress supports a drive to shift from teacher-centred learning to student centred learning, which encourages self-discovery and construction of knowledge.

2.1.2 Social learning theory

The social learning theory has its roots in behaviorism, and puts emphasis on a cognitive process whereby an individual learns by modeling (Quinn and Hughes, 2007). According to the social learning theory, an individual possesses no inherent behaviour patterns at birth, other than reflexes (Quinn and Hughes, 2007) and, according to Bandura, the originator of this theory, cited in Bruce et al., (2011), learning takes place in a two-way interaction between personal factors and events in the environment. Therefore, the learner is not empty, but possesses a cognitive structure which is used to participate actively in learning. Most new behaviour is learned by observation of models in a natural setting (Asher, Undated), such as in the faculty by observing academic staff. The same author believes that learning can occur through direct experience, and can almost always be achieved indirectly by observing the behaviour of others and its consequences.

Bandura identifies four processes involved in the observational learning situation, which include attention, retention, motor reproduction, and motivation.

1. Attentional phase: During this phase, the observer (post graduate student) pays attention to the model (research supervisor) and the characteristics of the model (Bruce et al., 2011). The factors that may influence learning are interpersonal attraction between the research supervisor and the postgraduate research student, usefulness of the observed behaviour and distinctiveness, complexity and contact with the modelled stimuli (Quinn and Hughes, 2007). For effective learning, the student characteristics comprise the level of arousal, capacity to process information and previous background knowledge. According to Bruce et al. (2011) the attraction of students by the role model influences their attention, which means that behaviours of research supervisors can either motivate the students or not.

2. Retention phase: Once a research supervisor has gained the student's attention, he/she should model the behaviour that the student is expected to imitate. The highest level of learning can be achieved when the modelled behaviour is organized (Quinn and Hughes, 2007). Therefore, research supervisors should be organized in order to serve as good role models, especially when they are giving feedback to their students.

3. Motor reproduction process: Bruce et al., (2011) mentioned that in this phase, the students try to match their behaviours with that of the role model and evaluate how closely it resembles the modelled behaviours. Individuals lacking self-esteem and confidence and those who are dependent tend to be more easily influenced by the behaviours of models (Quinn and Hughes, 2007). Hence, research supervisors must act professionally, showing enthusiasm and the ability to do a task skilfully (Quinn and Hughes, 2007).

4. Motivation phase: According to Quinn and Hughes (2007), the modelled behaviour being learned is increased when the observer sees the model being reinforced for performing that

behaviour. Bruce et al. (2011) believe that motivation can be internal and or external. An external reward takes the form of praise of the work, such as a good mark, while internal motivation is the self-reward experienced by the student if the task is successfully completed. The supervision process should continually motivate the postgraduate student throughout the research project.

The process of research supervision at postgraduate level, not only expects the research supervisor to be a role model, but also expects academic staff and colleagues students to ensure a good intellectual climate for the students to develop into scholars. Bruce et al. (2011) highlight the importance of peers in modeling expected behaviour. Hence, postgraduate research students are expected to consult not only their research supervisors, but also their fellow students for enrichment of their research project.

2.1.3 Constructivism learning theory

Bruce et al. (2011) argue that learning, from the perspective of constructivism, is not a single theory, but rather a cluster of views from various theorists. These include Lev Vygotsky's zone of proximal development theory, explained by the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers; Piaget's theory whereby social interaction has an influence on the development of the individual; and Jerome Bruner, a recent contributor, who has incorporated social and cognitive aspects (Grabinger and Dunlap, 1995).

In today's complex world, learning to think critically, to analyse and synthesize information to solve technical, social, economic, political, and scientific problems, and to work productively in groups are crucial skills for being successful and fulfilling participation in our competitive society (Grabinger and Dunlap, 1995). Therefore, this involves values of

constructivism, which are collaboration, personal autonomy, generality, reflectivity, active engagement, personal relevance and pluralism (Grabinger and Dunlap, 1995). Both postgraduate research students and research supervisors should consider these values of constructivism for successful work during the process of research. According to Pearson and Brew (2002), the goal of research is to develop new knowledge, which is then implemented in order to bridge the gap between theory and practice.

The first characteristic of constructivism is the notion that knowledge is not a product to be accumulated, but is an active and evolving process in which the learner attempts to make sense of the world (Gurney, 1989, cited in Grabinger and Dunlap, 1995). Constructivists assume that knowledge is not absolute, but is constructed by a learner based on previous knowledge and overall views of the world (Vasuthevan and Viljoen, 2003). Constructivists assert that learning is fostered by gathering information from new connections; from new insights gained by journey into other disciplines; from active, collegial networks; and from open boundaries (Grabinger and Dunlap, 1995). The students, therefore should be encouraged to work together in order to broaden their understanding from multiple perspectives.

While conducting research in a discipline such as nursing, postgraduate students are expected to interact with fellow students, academics, including the supervisor, and other health professionals in order to construct useful knowledge. Through interaction with the others, the postgraduate student gets different views, which can be critically analyzed and viable information that is suitable to the topic under study can be retained. Bruce et al. (2011) state that constructivists accept that a student can construct knowledge and transform it for meaningful use and integration into life roles. Understanding comes from interactions with environment, which create cognitive conflict and stimulate learning and then knowledge evolves through social negotiation and evaluation of the viability of the information (Vasuthevan and Viljoen, 2003).

The information processing orientation is guided by three principles including (1) prior knowledge, whereby current learning is affected by the past; (2) encoding specific specificity, whereby the closer the resemblance between the situation in which it will be applied, the more likely it is that transfer of knowledge will occur and learning will take place; (3) elaboration of knowledge, whereby information will be better understood and remembered if it is accompanied by activities, such as discussion, answering questions, teaching peers and critiquing (Vasuthevan and Viljoen, 2003).

Bruce et al. (2011) emphasize that self-directed learners are often required to use their own time and must be able to actively plan and organize their learning. They should allocate sessions in their timetable, where, through critical reflection, they can look back on experiences, actions and decisions, and think about, criticise and correct errors and distortions that occurred (Mezirow, 1990 cited in Schaefer and Zygmunt, 2003). However, self-directed learning is not inborn, and there is a need for guidance from research supervisors in order for postgraduate students to become independent researchers.

2.1.4 Connectivism learning theory

Educational environments utilized various broad learning theories that developed during the time when learning was not impacted by technology (Andrew, 2011, Siemens, 2005). Times have changed, however, and now people need to be flexible and think creatively in order to solve problems and make decisions within complex, ill-structured environments (Grabinger and Dunlap, 1995). Therefore, to meet the needs of learners today, and prepare the needs of learners in future, the connectivism theory is appropriate because it is known as an approach to teaching and learning for the 21st century (Kop and Hill, 2008).

Today, technology has fostered knowledge production. Gonzalez (2004), cited in Siemens (2005), states that half of what is known today was not known ten years ago. Siemens (2005)

emphasizes that theories of learning that describe learning principles reflect the learning environment. However, new learning theory builds on older theories because they have occurred to explain what old theories have not been able to explain (Kop and Hill, 2008). Thus, to provide the most effective support to postgraduate students, research supervisors should consider different theories while they are carrying out the task of research supervision. The connectivism learning theory is based on four key principles for learning, which include connectedness, autonomy, diversity and openness (Tschofen and Mackness, 2012).

Connectedness: Connectivism is based on the principle that all learning starts with a connection (Siemens, 2005) and that learning is the ability to construct and traverse connections (Downes, 2007). This theory is based on the premise that knowledge exists in the world, rather than in the mind of an individual, so that students can obtain knowledge through valuing diversity of opinion by making connection between many sources, which in return lead to new knowledge (Cook, 2012). This has been emphasized by Siemens (2005), who argues that knowledge exists in external structures of similar nature, as it exists physically within our minds, then it is possible to assign knowledge and learning attributes to the distributed nature of networks formed between people. In the other words, it resides inside and outside of ourselves, where we have to make connections with the external environment that enable us to learn more and more important things than our current state of knowing. Downes (2010) suggests that the system of education and educational resources should be structured in order to maximize interactivity.

Autonomy is necessary for connectivism to occur. It is defined as a choice and control of self that offers the basis of a rationale or understanding of the motivations involved in making those choices (Tschofen and Mackness, 2012). An autonomous individual is committed to three values and has the ability to realize them. These three values are self-knowledge, self-direction and self-expression (Aviram and Assor, 2010). The same authors argued that there

is no sense in enhancing motivation of commitment to autonomy without enhancing the ability for autonomy. Autonomous learners pursue their goals because they seem reasonable and meaningful and fit their personal and authentic interests and values (Aviram and Assor, 2010). More advanced and continual learning can best be provided through a networked learning where capable, self-aware learners are able to identify and meet own knowledge needs, allowing learners to integrate new information with existing knowledge, thus enabling more effective decisions (Siemens, 2005). According to Downes (2010), wherever possible, learners should be guided to such an extent that they become able to guide themselves and share values with other members of a community based on the evidence, reason and beliefs they find appropriate.

Diversity: Different people interpret the same matter from a different perspective. Downes (2010) argued that the intention of connectivists is not to make people the same, but rather to foster creativity and diversity among its members based on personal experience and insight, which contribute to the whole. The ability to support diversity in the significant areas of self-motivation, competence, and accommodation of diversity of personality traits offers unique strength (Tschofen and Mackness, 2012). Generally connectivists advocate the diversity of expression where learners feel free to express themselves in areas they feel most competent.

Openness: Connectivists frame openness in the context of sharing resources, ideas and expertise, and communicating and creating new information and insight through networks, which in turn bring about change in perspective (Tschofen and Mackness, 2012). For Downes (2010), this does not prevent privacy or being apart from the whole group, but it works in both ways, where one can choose to opt out as well as in. Tschofen and Macness (2012) mentioned that the idea of privacy does not exclude the ideas of sharing, and the personality trait of openness to experience is linked to curiosity, exploration, creativity, and unusual ideas in order to expand understanding.

2.2 Postgraduate research supervision

The Council of Higher Education in South Africa [CHE] (2007) defined postgraduate research supervision as process of promoting students research activities leading in whole, or in part, to the award of a masters or doctoral degree. Postgraduate research supervision is a cornerstone of an academic career at a university and is considered as one of the more complex forms of teaching in higher education (South African Nursing Council, 2009). However, universities in developing world have retained teaching function and weak research function (Byrne and Keefe, 2002) with little focus on research supervision. Its goals are both the production of good dissertations/thesis and the transformation of the student into a competent and independent researcher. Postgraduate research and supervision are core academic activities for most higher education institutions worldwide and provide the link between teaching and learning with research (CHE, 2007). This concept is relatively new in nursing education, as supervision in nursing has largely been associated with clinical practice.

The research supervision process is a complex teaching and mentoring activity that includes a range of activities, which include: (1) assisting students to define the research topic and design an acceptable research proposal; (2) getting the proposal approved; (3) providing guidance on appropriate literature; (4) assisting to determine the research design and methodology; (5) supporting students in collecting and analysing data and writing up the final product; (6) providing detailed feedback to students and meeting report requirements on the students' progress; and (7) writing a final report on the research process for external examiners and the examining committee (CHE, 2007). Furthermore, the faculty is required to support access to funding for student research, and guidance on how to make their research results public (CHE, 2007).

However, currently in South Africa, the lack of appropriately qualified staff and appropriate research infrastructure fail to attract postgraduate students (CHE, 2007). Quality of research supervision has been identified as a concern of postgraduate programs and staff training and development is one of strategies identified to overcome this concern.

2.3 Research supervision models at postgraduate levels

There are two different models of research supervision, being the traditional model and the new model. Whichever model of research supervision is being utilised, however, discussions and scaffolding are required in order to build research skills and independence in candidates (Grant, 2010 cited in Picard et al., 2011).

2.3.1 The traditional model of research supervision

The traditional model of research supervision is based mostly on a single supervisor working with a motivated, well-prepared student over an extended period of time (Halbrook and Johnstorn, 1999 cited in Zhao, 2003).

Within this model, the research supervision is defined as a fiduciary relationship that can assist the academic supervisor in enhancing student learning (Mackinnon, 2004 cited in Severissson, 2012). It can also be defined as an interactional process that requires the student researchers and the research supervisors to consciously engage each other within the spirit of professionalism, respect, collegiality and tolerance (Ismail et al., 2011). Supervision is considered as a type of learning process, where the supervisory dialogue must be viewed as personnel meeting (Lauvas and Handal, 2006 cited in Reida and Marshall, 2009).

This model can sometimes be characterised as being isolated and intense as a result of the intimate personal and dependency relationship between supervisor and student (CHE, 2007, Picard et al., 2011). The strength of this model, however, is based upon the assumption that

close personal and individual contact between a supervisor and postgraduate student is essential for a high quality of research education (Severisson, 2012). In the conventional process of research, the student is on site full time, and thus it is easy for supervisors to have close, personal and individual contact with them. Today's environment, however, is demanding a change as this model cannot accommodate students and supervisors who are both more mobile than in the past or the many part-time higher degree students, who have full-time jobs and need to be supervised at a distance or in a more flexible way (Holbrook and Johnston, 1999 cited in Severisson, 2012). Furthermore, there is a shortage of academic staff and an increasing number of postgraduate students. Therefore, it is evident that, in such a dynamic environment, the traditional model needs to be adapted.

Various universities are trying to improve the traditional model of research supervision by using different strategies. Some universities have encouraged research seminars, which are aimed to encourage students to talk about their work, progress, and to create opportunities for networking with other students and staff, which helps to neutralize feelings of isolation (Ismail et al., 2011). The same authors argued that this approach also recognizes that one supervisor cannot be everything to every student. In addition, in some countries, such as the Philippines, training academic staff in research is becoming increasingly important because research experience is increasingly being recognised as an important criterion for recruiting and promoting staff (Calma, 2011). This might motivate the academic staff to gain knowledge and skills in research and therefore to provide appropriate research supervision to postgraduate students. Perhaps, the student-supervisor relationship should be necessarily asymmetrical and the ultimate aim should be that the power imbalance reduce and level out as the students move gradually from the position of apprentice to one of colleague (Eley and Jennings, 2005).

2.3.2 The new models of research supervision

New ways of postgraduate research supervision have been developed to deal with the challenging dynamic environment. The new models of research supervision involve (a) two or more supervisors for one student (committee supervision), (b) a supervisory group made up of the research students themselves, and (c) online supervision. These new ways of research supervision are putting more emphasis on knowledge sharing among students and between supervisors. In practice, one student has two or more supervisors, making up a committee of supervision which provides complementary expertise that students can call upon. Students also participate in supervisory groups that involve students in their own and each other's supervision (Severissson, 2012). In addition, there is a move towards online research supervision because of the distance between the supervisor and the students and the convenience of communicating whenever it is necessary, without having face to face contact session (Zhao, 2003).

2.3.2.1 Team supervision

The traditional model of supervision has been criticized for the narrowness of its one-to-one relationship, and supervisor teams are increasingly becoming more common today. The practices of the new supervision model include joint supervision of one student by two or more supervisors (committee supervision), which provides complementary expertise that students can call upon (Severissson, 2012). Supervisor teams are commonly used at PhD level, where it is unlikely that a single supervisor will have the full range of knowledge and skills to support complex doctoral work (Watts, 2010). Meeting between the students and all supervisors involved should take place regularly to ensure that all involved are aware of, and fully understand, what is being researched, how it is progressing and how problems are emerging (Eley and Jennings, 2005).

It is advisable to have a leader who coordinates the group. Having no indication of who is the lead supervisor can create problems for the student during the research process (Eley and Jennings, 2005). One model is having an experienced supervisor working with a novice supervisor, who has expertise in the subject or method, but has not previously acted as a supervisor (Watts, 2010). This is commonly known as the mentoring model of research supervision. The strength of this model results in a shared commitment within the team to student centred supervisory practice, mutual respect and willingness to learn from each other that creates a teaching and learning environment characterised by intellectual generosity (Watts, 2010). Team supervision is thought to reduce the risk of incompetence, thus increasing completion (Rugg and Petre, 2004 cited in Watts, 2010). The supervisory team plays a vital role in providing a positive research culture in which the research student can learn and reinforce the skills required to operate autonomously (Picard et al., 2011).

However there are various limitations associated with this model. The supervisors may have different schools of thought and be antagonistic in presenting their ideas. They may also have different levels of commitment, which may confuse and frustrate the students (Eley and Jennings, 2005). It is advisable that the supervisors communicate with each other about their views on the students' work and build trust into the supervision relationship before meeting with the students to avoid sending splintered messages to them (Watts, 2010). The conflicting ideas of supervisors are not always bad, however, because they can provide opportunity for deeper critical reflection on ideas, with the process often eliciting the student's opinions, as well as enabling them to ask questions and demonstrate their knowledge (Watts, 2010).

2.3.2.2 Group supervision

In the literature, this model is commonly known as a cohort model of research supervision. The model of group supervision consists of a group of students who have a designated

research supervisor helping them to achieve their goals, and who provide feedback to each other through their interactions (College of Health Sciences, 2013, Bernard and Goodyear, 2009 cited in Mastoras and Andrews, 2011). Usual forms of group supervision are peer groups that either discuss research topics of common interests or comment on each other's texts (Samara, 2006) and the students are involved in the process of providing guidance to each other and sharing access to faculty resources in group setting (Severissson, 2012). In cases where the students have similar research topics, the research supervisor is usually included in the group (Samara, 2006).

Some higher education institutions are using this model due to enrolment growth on one hand, and emphasis on group work on the other (Vajoczki, 2010). Wilkinson (2011) mentioned that postgraduate research supervision needs much more reflection, inquiry and sharing with peers. Group supervision at postgraduate level provides a peer support programme which minimizes the sense of isolation, helps to achieve learning of collaborative skills, and creates an arena for the students to share their research and study experiences (Hortsmanshof and Conrad, 2003 cited in Samara, 2006). This has been emphasised by Ismail et al. (2011), who mentioned that postgraduate students are expected to acquire technical competence, analyse data, manage their time and personal responsibilities and build up a network of peers and expert colleagues. Thus, postgraduate students should be encouraged to interact with their fellow researchers regardless the model of research supervision being used in their schools or department. While these models have been used in Australia and Europe (Samara, 2006), the percentage of postgraduate students encouraged to participate in group supervision remain low. For example, results of a survey conducted in health science at the University of Sydney reflected that only 49% were actively encouraged by their schools/departments to interact with other postgraduate students (University of Sydney, 2010).

Successful group interactions require social and interpersonal skills, mutual trust, clear and efficient communication between the people involved, acceptance support and writing skills (Samara, 2006). By dialogical analysis, peers can identify unclear points and complicated formulation, and provide new ideas and suggestions on how to make a text more approachable to the reader (Samara, 2006). However, not all students may be equally prepared to participate actively in such groups and personal and cultural factors might influence the degree of involvement (Samara, 2006).

Some students may feel anxiety early stages of group supervision when they are feeling unsure of the process and what is expected of them, which may reduce their involvement and make them passive members of the group, which will have a negative impact on the group's dynamics (Mastoras and Andrews, 2011). The same authors suggest some strategies to address this, such as to explicitly discuss anxiety in the initial or early session of the group. The supervisors may also wish to discuss and promote positive coping strategies and ways to reframe such anxiety as a challenge for further growth. Conflicts may arise in a group of supervisees, which is a challenge commonly seen in formulation of the group process. The supervisors must also ensure that they are prepared to deal openly and respectfully with conflicts that arise, whether between supervisees, the supervisors or both (Mastoras and Andrews, 2011). It can be seen that balancing the multiple roles of the supervisor may be a challenge. In addition, they require strong facilitation skills (Mastoras and Andrews, 2011) which is challenging many nurse educators today. New research supervisors may choose to use a more structured format in order to ensure that the time is dedicated to feedback and discussion.

2.3.2.3 Online supervision

Today, there is increasing demand for flexible forms and structures of research education and training which are underpinned by the extensive use of Information Communication and Technology [ICT] due to the increased number of part time postgraduate students and the limited number of supervisors, who have a lot of other responsibilities (Zhao, 2003). Thus, there is a need for online research supervision, which requires commitment of working online for both student and research supervisor. Online research supervision increases time and space flexibility and availability of the supervisors (Loureiro et al., 2010). The online record-keeping and information-sharing facilities are potentially particularly valuable in the science and technology disciplines (Picard et al., 2011).

However, postgraduate students and their research supervisors may suffer from experiences of isolation. High expectations surround the supervisor and student interactions. Personal and professional co-operative work overtime leads to the successful completion of a research project of merit, which shows a high level of intellectual engagement, coherence, originality and publishability, and makes significant contribution to knowledge (Wisker et al., 2007).

In Canada, distance research supervision of masters nursing students is a new experience for many faculties (Bruce, Stajduhar, Molzahn, MacDonald, Starzomski and Brown, 2008). The same authors argued that this new way of research supervision poses challenges which are not encountered in traditional campus-based supervision, such as not knowing the supervisor, having difficulties in developing a mentoring relationship between the students and the supervisor, and conducting analysis at distance. These difficulties result in longer than planned completion times of research projects. There have been mixed reviews regarding online supervision and some authors found that distance education students tend to

be more successful than full-time students, while others found that their performance is generally poorer (Van Biljon and De Kock, 2011).

2.4 Input drivers of research supervision

Worldwide, different stakeholders, from political to academic fields, have stressed the need to increase the quality of research supervision activities (Loureiro et al., 2010) because research supervision has been recognised as a vital process in the success of postgraduate studies (Abdullah and Evans, 2012). As stated by Bruce, et al. (2011), the quality enhancement notions surrounding research supervision include complex interactions between the researchers, departments, administration, the university and the external research environment. This means that each part has a valuable role to play for successful research supervision. Furthermore, Dann (2008), claims that there is a duality of responsibility for the successful completion of research projects between the supervisor and the students.

2.4.1 Expectations of Postgraduate research student

Masters students are expected to master the methodology of the research process and therefore need more input in developing depth, synthesis and critical ability (Ismail et al., 2011). According to Brockbank and McGill (1998), through the process of research supervision, a student acquires deep learning by concentrating on what the topic is about in association with an active approach to learning and a desire to get a grasp of the main point, make connections and draw conclusions. This was also asserted by Bruce, et al. (2011), who emphasised that a deep-holistic lifelong learning is acquired by the student who is an active constructor of his/her own knowledge and that learning brings about a conceptual change if the student reflects and learns intentionally.

The students engaged in research work hard, motivated by the desire to progress and successfully complete the postgraduate program. Armed with practice and theoretical knowledge of research methods, masters nursing students are expected to focus on empirical knowledge and learn in depth skills in the research process (Dobratz, Primomo and Bjorling, 2006). The postgraduate student researchers are expected to collaborate with a range of people to obtain various forms of assistance in leaning research expertise and how to be a professional researcher. They are also expected to be fully competent in using the various resources of the university, such as the library, relevant departments, laboratory (Brockbank and McGill, 1998). The graduates of masters programs are expected to integrate research, theory, and practice (Dobratz et al., 2006).

However, the postgraduate students, as adults, have a lot of challenges to overcome such as family commitment, work commitment and finances, which may affect their achievements (Ismail et al., 2011). Thus, there is a need for more input in order to develop depth, synthesis and critical ability. Even if the coursework masters dissertation is classified as a minor thesis, the completion of such a thesis requires substantial input on behalf of both student and supervisor (Drennan and Clarke, 2009). Singh (2011) developed a template to be used as a guideline for the students, which presents the basic format pertinent to writing postgraduate dissertations thoroughly.

In a study conducted at the University of South Africa (UNISA), Lessing and Schulze (2003) found that a third of the students had no previous training in research methods, and only 29% had received previous training and felt that they were adequately prepared for their masters studies. In the same study, of those who attended workshops, only 36% felt they had been somewhat helpful in their master's research. Universities today are expected to contribute to the production of knowledge, but in some instances research supervision is not reaching its aim. For example, student researchers the in Philippines are not able to meet local and

international publication quality standards and therefore, theses and dissertations are stored in the university's resource collection following completion and are not submitted for publication (Calma, 2011). A study done among masters nursing students in one university in South Africa by Lekalakala-Mokgele (2008) found that 95.5% (n=21) of respondents agreed that they took initiative in raising problems or difficulties with their research. At Deakin University, 80% of the respondents agreed that they were aware of the required standards for the research project, proposal defence, and formal monitoring of their research activities. These findings are similar to those found in national survey on research experiences in UK among postgraduate students, where 79% of the respondents were positive about understanding the standard of work expected (Hodsdon and Buckley, 2011). A survey of a Higher Education Academy revealed that 80.2% indicated that they understood their responsibilities as researcher students (Hodsdon and Buckley, 2011).

Similar results were found in a study conducted at a South African university among masters nursing students regarding students' responsibilities. Lekalakala-Mokgele (2008) found that 100% of the participants accepted that they were responsible for the original contribution to the development of a proposal, under the guidance of supervisors. However, in the same study, 2% of the participants felt that it was not necessary to seek support from colleagues and that they did not need to attend formal classes on research. This is probably due to their socialisation with the traditional way of research supervision, where the students expect to collaborate with their research supervisors.

A qualitative study conducted in the UK, in terms of the role of supervisors, masters students expected their supervisors to have listening skills, empathy, professional skills and a background knowledge of the research subject in order to offer guidance (Woolhouse, 2002).

2.4.2 Research supervisor

According to Akoojee and Nkomo, 2007 cited in Van Biljon and De Kock (2011) the research supervisors are caught up in the tension between widening participation and maintaining completion rates, quality and standards. In science, the research supervisors tend to supervise a large number of students with diverse projects and learning needs which requires time and advanced research skills for the successful completion of research projects, (Picard et al., 2011).

A role can be defined as a set of responsibilities, obligations and duties associated with a given position that an individual holds in society (Hodza, 2007). According to Drennan and Clarke (2009), effective practices in assisting masters students to successfully complete their dissertations are punctual feedback, providing balance between direction and independence, regular meetings, appropriate expertise, and the ability to suggest alternative designs, if problems arise. In Australia, the study conducted at Deakin University among masters and PhD students (n=1200), 90% of respondents reported that they experienced mutual respect with their supervisors during the supervision process and that their supervisors provided support and feedback (Abdullah and Evans, 2012).

In addition, postgraduate research supervisors have to coordinate factors influencing research supervision in an integrated manner, such as students' personal attributes, supervision practices, and institutional or environment aspects (Heath, 2002; Lessing & Schulze, 2003 cited in Van Biljon and De Kock, 2011). Wisker (2005) states that research supervisors serve as the link between the university and students.

There is a lack of clear conceptualization leading to confusion as to whether postgraduate supervision should be predominantly regarded as a research practice or a teaching practice (Wilkinson, 2011). Whichever it is, however, research supervision is a part of the educational

curriculum because it requires facilitating students to become independent professional researchers. The role and function of the academic research supervisor requires multiple skills and abilities, including advanced research methodology; facilitation skills, which enable them to provide proper and competent advice to different students with different backgrounds; and having different topics in the same period, with the emphasis on the area that the student will be working on.

It is highly desirable that the supervisor gets to know the students well enough to allow for different strategies and timescales to be used in order to achieve independence (Eley and Jennings, 2005). To be able to differentiate learning processes during the supervisory dialogue, the supervisor must be present and be able to listen to the student as an individual person and to detect the particular challenges and potentials in the specific personal professional context (Reida and Marshall, 2009). A good research supervisor seems to have many of the qualities of good lecturers and good counsellors (Abiddin, Hassan and Ahmad, 2009, Wilkinson, 2011).

The supervisors have the responsibility of providing intellectual leadership and facilitating research students' learning (Brockbank and McGill, 1998) where they should always attempt to stretch the mind of students through the encouragement of deep thinking and exploring outside the box (Hodza, 2007). These require the active engagement of the supervisor throughout the research process to assist students in solving a research problem (Lategan, 2008). Research supervisors, as scholars, should reflect on their practice, deliberately researching the relevant theory of their own practice, which will improve their knowledge, understanding, and their profile as scholars in a discipline such as nursing (Wilkinson, 2011). To maintain the quality and standards, they pay attention to the detail of operations and systems, ensure specific assessment criteria and students outcomes to meet university requirements (Boud and Costley, 2007).

The process of considering the supervisor as an expert to learning through doing allows the novice scholar to gain knowledge, skills and commitment regarding to their roles (Hodza, 2007). The same author argued that the process of being attached to an expert of learning through doing allows the novice researcher to gain knowledge, skills and commitment. The supervisors are under pressure to improve their practice in order to improve students throughput, and must be flexible and provide students with sufficient support (Brockbank and McGill, 1998). The maturity awareness, flexibility, level of trust and anxiety of the supervisor can lead to constraining their students' research focus (Brockbank and McGill, 1998). Anxiety can be related to the supervisor's concerns about the student's ability to complete research project and the effect of student failure on their reputation (Kramer, 1996 cited in Brockbank and McGill, 1998).

In terms of supervisors' experiences at masters level, many dissertation supervisors feel that the approach to supervising masters students has evolved and changed over the years during their careers (Pilcher, 2011, Pilcher, Cortazzi and Jin., 2006). From the students' perspective, a good supervisor is one who would have valuable, helpful advice and guidance, who gives constructive feedback on drafts, and answers to questions (Pilcher, 2011).

To provide quality service, most universities have prerequisite requirements an academic staff member must fulfil before they can be allowed to take the role as principle supervisor, such as the possession of high degree qualification that is equivalent to, or higher than, the candidate (Abdullah and Evans, 2012). However, although there is a view that research supervisors are senior academics, research indicates that there is no direct link between the length of time a person has been employed in the academy, their hierarchal position and best supervisory practice (Trudgett, 2011). Furthermore, worldwide, there is a challenge of shortage, recruitment and retention of the academic staff and in many African countries particularly, this is big problem which needs urgent intervention (Tettey, 2010). This problem

can impact negatively on quality of research supervision, especially in Africa, where there is an increase of postgraduate students.

In a study conducted in UK, according to supervisors, characteristics of a good supervisor at masters level include having personal characteristics of patience and approachability; being available; having the ability to supervise a variety of students, individualising every student; and giving constructive feedback (Pilcher, 2011). However, some supervisors find that they are not confident in supervising students. For example, in the same study one said “*sometimes I find myself not entirely confident helping a student with their research*”. While this cannot be generalised, it reflects the way research supervisors are not trained for research supervision, while they are expected to do it.

In an interview with research supervisors, Woolhouse (2002) found that they try to be supportive, facilitators, sounding boards and general advisors. However, in a study conducted at the University of South Africa among academics supervisors (n=50), findings revealed that apart from senior lecturers, the majority of respondents (88%) viewed the selection of research problem as the role of the students, 76% viewed the selection of the appropriate theoretical framework as the role of students, 76.9% did not see it as their role to inform students about workshops to enhance writing ability, and 93.2% indicated that it was not their role to check that students are on track and constantly working (Lessing, 2011). These findings reflect supervisors’ unwillingness to take responsibility for the students’ research projects, probably due to their lack of training in research supervision.

The failure to meet the expectations of the students has had a significant impact on the completion rates and students’ satisfaction with the research experience (McCormack, 2004; Boud and Lee, 2005; Ives and Rowley, 2005 cited in Dann, 2008). Thus, there is a need for facilitation skills from research supervisors, an aspect that is currently challenging nurse

Educators in South Africa, probably because many nurse educators have been trained in the traditional way, known as teacher-centred (Gwele, 2005, Lekalakala-Mokgele, 2010). Lekalakala-Mokgele (2010) states that changing from traditional teaching to facilitation of learning in nursing has been fraught with problems. This method supports one on one research supervision model, consider research supervisor as an expert, and is failing in the era of technology with an explosion of information.

According to Schumacher, Risco and Conway (2008), the researcher supervisor who is not only well versed in research methods, but also has a natural gift for critical analysis and offering feedback works. The role is much more clearly defined as a professional relationship than that of a tutor, friend or colleague as it relies on more than good will and spare time (Wisker, 2005).

2.4.3 Institutional support

Universities are expected to extend and recreate knowledge, to transfer it to other stakeholders, to train highly qualified professionals and to give them proper tools in order to endow them with lifelong learning skills (Loureiro et al., 2010). For achievement of this goal, the department/school has a large role to play by supporting postgraduate students toward completion, as it represents the institution in a decentralized system. This role includes ensuring that the research supervisors are providing quality services to postgraduate students and ensuring that the material resources are available for both themselves and the students.

2.4.3.1 Resources

The role of institution is to provide the necessary resources for successful research projects, such as competent research supervisors, appropriate infrastructure, such as libraries, Local Area Network (LAN) with computer facilities and a policy of research supervision. However, inadequate support facilities and equipment have been reported in the literature (Abiddin,

2007). The Government of Australia is funding universities based on completion of research higher degrees, which has caused institutions to be concerned with the quality of supervision and to recognize the need to set criteria for levels of competence (Brew and Peseta, 2004). The faculty is required to support access to funding for student research, and guides on how to make their research results public (CHE, 2007).

In a study conducted in Philippines, only half of the participating staff (n=53) reported satisfaction with the availability of research facilities and resources for themselves and their students (Calma, 2011). At Deakin University, only 51.1% of the participating students were satisfied with the provision of computing resources and facilities, 50.4% had appropriate financial support for research activities, while 60.8% had access to the equipment necessary for their research (Abdullah and Evans, 2012). In a study conducted at the University in Sydney, the number decreased with only 31% of the respondents having appropriate financial support for their research activities (University of Sydney, 2010). In the UK, 57% of the postgraduate students were least positive about the availability of financial support (Hodsdon and Buckley, 2011). In a study conducted in South Africa, Lekalakala-Mokgele (2008) found that some students seemed to think that the university was not responsible for assisting them with finances as indicated by 68.2% of respondents.

2.4.3.2 Intellectual climate

Research is an interactive process which requires the development of academic and social skills (Phillips and Pugh, 2000 cited in Abiddin, 2007). Fostering a knowledge environment that is conducive to knowledge development, use and transfer is vital because the process is not a one-stop process, but a spiral cycle of continuous improvement and development for researchers (Zhao, 2003). The institutions have responsibility for the quality of research training and its coordination (Brockbank and McGill, 1998). To ensure the quality of

postgraduate research supervision, most universities have some prerequisite requirements that must be fulfilled by an academic staff member before he/she can be allowed to take the role as principal supervisor (Abdullah and Evans, 2012).

However, there are issues impacting on research supervision that the school is expected to manage for effective postgraduate research supervision, such as the number of students being supervised, the supervisor's inability to manage a research project effectively, an inadequately prepared supervisor or a research supervisor whose interests are different from those of the students (Abiddin, 2007).

In the past, it was assumed that supervisory skills came naturally. In some countries, there are now training courses available for supervisors, both on the process of supervision and the final product, with an emphasis on delivering high quality of education (Remenyi and Money, 2004). The same authors argued that it is the supervisors' responsibility to be aware of what is required and what is available, while it is the universities' responsibility to ensure that there are adequate funds available to pay for the training. Furthermore, the capacity building of staff to integrate research into teaching, designing curriculum to facilitate students engagement into the research community and enabling students to develop an awareness of research at the school level are the intervention to be applied (Drennan and Clarke, 2009).

At the University of Sydney, Australia, formal training is provided in six modules on research supervision aimed to develop supervisory skills and supervisors' ability to manage the process. Each module is organised around six stages of supervision, including preparation of supervision, the first meeting, management of the process, the end of the year review and helping students with writing and completion of their thesis/dissertation (Brew and Peseta, 2004). These modules can be accessed as a coherent programme or separately to address needs and interests. To enhance integration of part-time postgraduate students, the strategies

would be the inclusion in timetable of student-led research seminars, and workshops, by which presentations from previous students present their research dissertations, as well as programmes on publishing and disseminating student research (Drennan and Clarke, 2009).

In addition to ensuring that research supervisors are suitably trained, students need to conduct their research in an environment that is intellectually stimulating and conducive to knowledge generation. At Deakin University in Australia, (n=1200), 52% of the respondents reported that the research ambiance in their department stimulated their work (Abdullah and Evans, 2012). In another study conducted in Australia within the University of Sydney, regarding the way in which students were supported by their school/ department as whole, only 40% agreed that they were integrated into their departments/schools, 48% believed that schools/ departments stimulated a research ambiance and 49% were actively encouraged to interact with other postgraduate students by their schools/departments (University of Sydney, 2010).

According to Chikoko (2010), the part-time masters students seem to be inadequately engaged and integrated into the academic culture of the university and they frequently drop-out, meaning that students are not re-registering, even though they have not completed the requirements for their qualifications. The poor graduation and retention rates and high drop-out rate are unacceptable and represent a huge waste of resources, both financial and human (Ministry of Education, 2001). Beside the waste of resources, the moral and psychological damage associated with failure is incalculable (Ministry of Education, 2001). Universities need to develop strategies aimed to foster integration for these part-time students.

The average dropout rate for thesis based masters students between 2000-2006 was about 67% in the Faculty of Law, 56% in the Faculty of Health Sciences, 40% in Humanities, Development and Social Sciences, while Medicine was the lowest, at 37% (Tettey, 2010). Without effective supervision, new knowledge will hardly ever be produced (Lategan, 2008).

According to Chikoko (2010), the first year masters students found their studies worthwhile, but their levels of integration with the institution were low, thus weakening their coping strategies. This might be similar to research supervision, where the students at master's level might not be well integrated into the research culture of the university.

2.5 The relationship between students and research supervisor

The relationship between research students and research supervisors is at the heart of the research supervision process. The supervisory relationship is primarily to ensure that a wealth of personal and cultural issues and experiences are addressed, and that the student is guided and empowered to become an autonomous learner engaged in a topic sufficiently in order to complete a degree (Wisker, 2005, Wisker et al., 2007). This was also stated by Eley and Jennings (2005), who agreed that this relationship has always been fundamental to research, but has received a little attention until recently. Jonson et al., 2000, cited in Pillay and Balfour (2011), state that the relationship between the student and supervisor is a key factor in postgraduate studies and many postgraduate studies have collapsed mainly because of that relationship. Interactions and learning conversations based on insights and good use of development and experience are essential (Wisker et al., 2007).

The supervision of postgraduate research has four different dimensions, the advisory role; the quality control role; the supporting relationship, nurtured by the supervisor; and the guidance of the students by the supervisor (Mouton cited in Marie de Beer and Mason, 2009). The interactions and collaboration should be as equals in order to empower the students to undertake and maintain momentum with their own research, while ensuring the responsibility and self-awareness which encourage both process and outcome (Wisker, 2005). Early conversation should focus on the student's development of a research proposal and conceptual framework that enables the development of an appropriate research design and

scaffolding for their research to identify skills and gaps in order to address these in the future work on research methods and practices (Wisker et al., 2007).

Learning contracts are indicated as a sound basis for proceeding to developmental and problem solving interactions. They provides a way of objecting and agreeing to working relationships which, when things go wrong, can help both student and supervisors to agree on the way forward (Wisker, 2005). Many academics consider research supervision to be a teaching role as well as a research role. As with teaching, giving criticism is one of the main activities that a supervisor has to undertake if it is appropriate at a given point of time, so that the student can eventually learn how to evaluate their own work, and thus undergo self-development (Eley and Jennings, 2005). Without opportunities to engage in critique and dialogue about their work with others, including the research supervisor, the research might be lack synthesis (Wisker et al., 2007). In a dynamic relationship and at different stages, the supervisor needs to engage in various modes of interaction to guide, prescribe and inform, confront, elicit, clarify, support, summarise and move the student on (Wisker, 2005).

It is very important that the students are clearly aware of requirements, dates, rules, but it is also essential that, as largely independent learners, they are fully involved, creative partners in the inception, clarification, development and progression of the research, then of the interpretation of data and the drawing of conclusions (Wisker, 2005). For ownership, responsibility and for the project to be the student's own, it would be preferable to have a high initial number of eliciting interactions, gradually evolving into the student taking control. However, sometimes it is necessary to challenge the students in order to help them overcome sticky points, and take learning leaps in their work (Wisker, 2005).

Guiding and facilitating the development of postgraduate nursing students' education and research experiences need to be developed (Carr et al, 2010 cited in Severissson, 2012).

Masters supervision is often compared with PhD or undergraduate supervision, so this may assume a gate keeping role (Pilcher, 2011). In research supervision there is a duality of responsibility for the successful completion of a research project between the supervisor and the students (Dann, 2008). To prevent problems, there should be regular collaboration between student and supervisor; which would give opportunity for the student to inform the supervisor of any unusual developments in the progress of research work (Eley and Jennings, 2005). The same authors recognise the role of computer technology and advise that they can communicate via email. However, many challenges to this route have been identified.

In terms of supervision of international students, some literature highlights specific problems such as time pressure, language difficulties, lack of critical analysis and prevalence of personal problems (Brown, 2007). The supervisors often meet students who are ill-equipped to engage in critical discussion with them, with the effect that extra time has to be spent on training them in art of critical analysis (Brown, 2007). Thus, it is difficult to locate suitable dissertation supervisors given the increasingly diverse student body and the potentially large number of masters dissertations the staff may be expected to supervise (Smith, 2007 cited in Pilcher, 2011). It is important that the student be able to work and communicate effectively with the supervisor and not feel intimidated in the relationship (Ismail et al., 2011).

In mentoring, the supervisor looks at the different cultures and values in research arenas in which a student might operate, and provides opportunities to experience research in other situations through exchanges and placements (Brockbank and McGill, 1998). Mentoring also involves supporting students with the emotional dimension of their experience, as they learn how and when to assert independence. Mentoring in relation to research is a way of transferring knowledge in practice, where the research is being conducted, in order to build research competence in nursing (Byrne and Keefe, 2002, Severissson, 2012).

A mentoring relationship may continue beyond the task of completing a research degree and will almost certainly change over time as the postgraduate student moves from being a novice to become a competent researcher (Lategan, 2008). However, the diversification of the student population, as well as upward pressure on academic workloads and reduced candidature duration, has made the formation of sustained supervisor-student relationships more difficult (Catterall, Ross, Aitchison and Bergin, 2011).

In a study conducted in Ireland among graduate coursework masters graduates in nursing (n=220), it was found that they were generally positive about the quality of research supervision, especially to the provision of information from supervisors and advice received from supervisors on topic selection and refinement (Drennan and Clarke, 2009). The nature of support within these universities appears to be good.

However, in the Department of Indigenous Studies (n=55) at Macquarie University in Australia, the data indicated that only 27.3% of the respondents believed that their supervisors were the most supportive person (Trudgett, 2011). In exploring the perceptions of higher postgraduate students in department of education at UNISA, Lessing and Schulze (2003) found that 50% were satisfied with the guidance they had received in planning their research in terms of time-fames, 51% were happy with the planning of the research project in terms of time-frame, while 49% were satisfied with guidance received on presenting and interpreting the research results. These results indicate the low quality of research supervision, and could be due to the lack of training for research supervisors.

Postgraduate students often experience frustration as a result of a perceived lack of support or what is referred to as “a disjunction in expectations” between the student and the supervisor (Ismail et al., 2011). The failure to fulfil the expectations of the students had a significant impact on the completion rates and students’ satisfaction with the research experience

(McCormack, 2004; Boud and Lee, 2005; Ives and Rowley, 2005 cited in Dann, 2008). In some situations, the relationship may develop badly and if it is recognised early enough, the best option may be to change the supervisor (Eley and Jennings, 2005).

It has been suggested that the staff's capacity to integrate research into teaching should be developed (Jenkins and Healy, 2005 cited in Drennan and Clarke, 2009). By building the capacity of research supervisors, they became able to change their response to supervision, reflect on their development as supervisors and thus become more proficient. It is important to ensure that research students and their supervisors have the necessary information regarding the research process as they are both required to fully understand and comply with their ethical responsibilities (Picard et al., 2011). This can improve the output within high education institutions which are challenged with staff shortages and students who are unprepared in the necessary skills to conduct a research project at master's level. The main issue, however, is that the students' ability to operate confidently in the unique environment requires careful scaffolding and support from their supervisors in the form of explicit supervision pedagogy (Picard et al., 2011).

2.6 Output of research supervision

The research supervision process should help the students to determine the skills and knowledge they value in their life long development and then help them to determine how, who, where, and when these skills and knowledge may be acquired (Savickas, Nota, Rossier, Dauwalder, Duarte, Guichard et al., 2009).

2.6.1 Scholarship development

Scholarship through postgraduate research supervision is crucial for knowledge generation in higher education institutions (Pillay and Balfour, 2011). According to Boyer, 1990 cited in

Trach and Ritterbush (2006), scholarship is a variety of creative work carried on in a variety of places, and its integrity is measured by the ability to think, communicate, and learn. A scholar is defined as a person who has intensive knowledge in a given field and is pushing the boundaries of that knowledge in a new direction (Lindeman, 1981, cited in Trach and Ritterbush, 2006). Both students and research supervisors should be engaged in scholarship development during the research journey

Nurse educators have important role to play in motivating masters nursing students to become scholars during the research supervision process. It is imperative that the nursing faculty work smarter, not harder, and prioritise its efficiency (Schumacher et al., 2008) because scholarship is associated with high standards of excellence, rigorous science, and attention to details as well as thoroughness and comprehensiveness (Trach and Ritterbush, 2006).

Boyer's scholarship model has been chosen as a template for professional development because of its applicability to excellence in nursing education (Pape, 2000) and, according to Wilkinson (2011), the model looks at all of the activities that represent the work of an academic. The definition of scholarship by Boyer includes the four dimensions of discovery, integration, application, and teaching (Pape, 2000, Severisson, 2012, Trach and Ritterbush, 2006). According to Boyer, 1990 cited in Chetty and Lubben (2010), and in Wilkinson (2011) discovery, similar to research, involves a search for knowledge for its own sake; integration informs connections across disciplines, in order to understand the work in a broader context. The same author state that application bridges the space between the realities outside the academic context and is referred to as scholarship engagement; and teaching transforms and extends knowledge by connecting interpersonal and intrapersonal understanding in a discipline.

Discovery is a two way process which focuses on the student. The research supervisor plays a teaching role; not carrying out the student's research, but guiding and leading the student towards the successful completion of research (Wilkinson, 2011). Thus, facilitation is applied in research supervision, which is in accordance with the student centred approach being applied in education of health professionals worldwide, in order to equip students with transferable lifelong learning skills, such as critical thinking skills, independent learning skills and problem solving skills. According to Fitzpatrick and McCarthy (2012), discovery is best exemplified through traditional research methods, which involve the creation and dissemination of new knowledge in a particular discipline.

Integration plays an important role in postgraduate research supervision. In the context of nursing education and nursing practice, the use of knowledge integrates both disciplinary and interdisciplinary sources (Severissson, 2012) for the development of the profession. The research supervisor must be able to make connections across many disciplines and fields, understand areas of student interest, and be able to interpret student contribution, which requires integrated pedagogical knowledge and skills related to research methods, learning theories, adult education, technology, leadership, and management (Wilkinson, 2011). Masters nursing students, as beginner scholars, should produce useful knowledge by integration of information from different disciplines in order to bridge the gap between theory and practice.

Application of postgraduate research and supervision contributes to the development of transferable skills of lifelong learning. According to Wilkinson (2011), lifelong learning becomes a reality and a commitment. The scholarship engagement combines creation, integration, application and teaching for the benefits of internal and external audiences of the university and occurs in all areas of the university's mission, including research, teaching, and service (Severissson, 2012). The scholarship engagement is made real when people

actively engage with learning material, with one another, and with the communities inside and outside of academic spaces (Wilkinson, 2011). This justifies collaboration between research supervisors themselves, student researchers, and others scholars outside the universities. The role of scholarly engagement is enjoying a resurgence of interest (Creative Research Systems, 2012).

According to Boyer, (1990), cited in Wilkinson (2011), **teaching** means to educate and attract future scholars. The same author believes that a good teacher stimulates active learning, rather than passive, and encourages students to be critical creative thinkers, fostering their capacity to continue learning after their college days. Masters nursing students should leave university with transferable research skills and be motivated towards further research in the future. Further, Kreber (2005) cited in Wilkinson (2011) pointed out other kinds of scholarship in teaching, such as a deep knowledge base, an inquiry orientation, critical reflection, peer review and publication .The postgraduate students are not empty vessels, but have experiences and memories, which research supervisors should allow them to build on (Wilkinson, 2011). The scholarship of teaching and learning in higher education should help to interrupt the syndrome of chronic drop out and unsustainable success rates, while elevating the quality of graduates (Jackson and Cleary, 2011).

The quality of scholarship is determined by the peers and partners of the university (University of Massachusetts Amherst Faculty Senate Outreach Council, 2006 cited in Severissson, 2012). Students perceive that the nature of the support provided by a research supervisor is determined in terms of (1) reliability, defined as the ability to perform the promised service dependably and accurately; (2) assurance, defined as the knowledge and courtesy of supervisor and his/her ability to inspire trust and confidence; (3) tangibility, which is related to physical facilities and equipment; (4) empathy, characterized by caring

and providing individual attention to the student; and (5) responsiveness, defined as having the willingness to help students and provide prompt service (Dann, 2008).

In nursing, research is a central component of a masters degree, and carries with it the expectation that graduates are able to critically examine nursing theory and become scholars in the discipline (Dobratz et al., 2006). Pape (2000) stated that nursing scholars desire to achieve and develop useful knowledge in the nursing discipline, while Hastings, Fisher, and McCabe (2011) emphasise that nurses have important roles to play of knowledge creation from concept development and basic scientific discovery through to evaluation and dissemination research. The production of useful knowledge will respond to the era of the knowledge-based economy, where the systematic acquisition and understanding of a substantial body of knowledge should be at the front of an academic discipline such as nursing education (Thompson et al., 2005).

The stakeholders of higher education, including students, academic staff, administrators, government and the scholarly community, have an interest in the outcomes of higher education and have perspectives on what constitutes quality outcomes (Zhao, 2003). Universities and individual supervisors are also responsible for socializing their research students into their academic and disciplinary cultures (Picard et al., 2011).

The completion of master's dissertation develop a number of skills and abilities including working independently and critically, developing arguments, and awareness and using advanced methodology designs that pertain to the student's discipline of study (Atkins and Redley, 1998 cited in Drennan and Clarke, 2009). This was also asserted by the American Association of Colleges of Nursing [AACN], 1996 cited in Dobratz et al. (2006), who argued that the learning goals for research at master's level is to become proficient with the ability to access data to solve nursing problems, to comprehend research methods, use technology and

information systems to retrieve extant information, and be able to integrate the research process in oral and written communication.

Armed with practice and theoretical knowledge, masters nursing students are expected to focus on empirical knowledge and learn in depth skills in the research process (Dobratz et al., 2006). In a study conducted in Ireland in six higher education institutes among coursework masters nursing students who graduated between 2000 and 2005, the results showed that the provision of infrastructural support and appropriate workload had a statistically significant effect on research capabilities (Drennan and Clarke, 2009). It follows, therefore, that it would be difficult for master's graduates to continue to be engaged in research when working in a place where there is no infrastructural support and appropriate workload.

The output of research supervision are qualified researchers and who present research outcomes with potential values to the knowledge-based society (Zhao, 2003). For the development of the nursing profession, the work of nurse researchers should clarify trends analyse their impact and offer insights into the direction they are taking by producing a useful body of knowledge which contributes not only to the nursing discipline, but also to the growth of economy of the society (Sullivan, 1996).

2.6.2 Skills and professional development

Postgraduate students grow during the research supervision process. The masters nursing students are expected to put research theory into practice, and produce a dissertation, therefore gaining research skills under the guidance of nurse educators. This can be compared to Dewey's statement that the purpose of education is more education (Noddings, 1995). Zhao (2003) argues that the heart of research supervision lies with helping students to critically manage knowledge, identify and exploit existing knowledge, create new knowledge, and develop academic and transferable research skills and methodology.

Therefore, the process of research supervision should motivate the student toward further research for personal and professional development. According to Sullivan (1996), most of expertise that is brought into the work has grown from the research of predecessors. This includes nurse educators who are playing the role of research supervisors. Masters nursing students, as adult learners, develop independence, research skills, time management and writing skills to produce coherent work under the guidance of research supervisors. However, researcher development and autonomy vary, both culturally and individually (Wisker, 2005).

Jackson (2008) identified a number of organisational challenges which impede participation in research activities such as limited resources, lack of skills, knowledge and opportunities, and a culture of individualism. In a national survey on postgraduate research experiences held in UK among postgraduate research students, 12.7% felt that research was a natural step for them to take, while 30.5% felt that it would improve their career prospectus for an academic or research career (Hodsdon and Buckley, 2011). In the same study, a large proportion of the postgraduate students who had been motivated to improve their academic career prospectus were in the health discipline (37.4%), while 30.2% were in arts and humanities. In the study conducted at Deakin University in Australia, findings revealed that 80.6% (n=134) of participants had developed the skills to manage a research project, 79.8% had improved their ability to learn independently, while 87.4% had improved their analytical skills (Abdullah and Evans, 2012).

On the other hand however, according to Ismail et al., (2011), a high proportion of postgraduate students fail to complete their studies within the time given due to problems related to the supervision process. Apart from the cost and manpower implications, the dropout causes damage to the individual's esteem and self-image (Chikoko, 2010). Therefore, the academy will not only be unable to produce the personnel required to support the

country's human resources needs, but also the quality of intellectual life will continue to erode (Tettey, 2010).

According to Hodsdon and Buckley (2011), information regarding skills and professional development of training and support received by research students is particularly relevant to higher education institutions to ensure that their provision is targeted, well attended, and has the greatest impact possible. The universities role is not only production of knowledge, but also its application (Byrne and Keefe, 2002). A national study conducted in Finland on the use of research utilization revealed that nurse teachers with doctoral degrees (12%) make better use of research in nursing education than those with master's degrees (66%) (Koivula, Tarkka, Simonen, Katajisto and Salminen, 2011).

2.6.3 Dissertation of master's degree

Masters dissertations have attracted far less scholarly attention than PhD theses, despite their distinctive character and the worldwide proliferation of masters programs being taught, particularly those involving continuing professional development (Anderson et al., 2008). Some supervisors feel that originality is important, but that it is not essential at master's level. While an undergraduate student is expected to do independent piece of work and a PhD student is expected to make an original contribution to a particular field, it is difficult to pin down what is expected of a masters student with respect to their dissertations (Brown, 2007, Pilcher, 2011). While there may be some similarities in students' experiences of undertaking a research project at whatever level, differences also exist, on account of contrasts in intellectual demands and time-frames (Anderson et al., 2008).

In the United Kingdom, masters students are expected to write dissertation of about 15,000 words, whereas undergraduate dissertations are commonly between 10,000 to 12,000 words (Pilcher, 2011). Furthermore, a dissertation for a master degree has some similarities to

undergraduate dissertations, but in terms of time, while the undergraduate dissertations may take a year, a masters dissertation must be completed in 10 to 12 weeks (Pilcher, 2011). This however, is not the case in South Africa, where, for example, at the University of KwaZulu-Natal, a masters dissertation is quite substantial and takes a year to complete because the dissertation comprises 50% of the total credits for the degree (College of Health Sciences, 2012). Given the weight and energy spend on the research project; there is a need to produce a publishable work for the purpose of knowledge sharing, as the public, too, is concerned about the amount of money spent on research when so many of society's problems go unsolved (Sullivan, 1996).

In the current dynamic environment, society needs knowledge transformers and managers; people who have the capacity of creating new knowledge, transforming information and their own knowledge, and adapting knowledge to society's needs (Zhao, 2003). Therefore, excellent dissertations should be original and have a research value. Both research student and research supervisor should be engaged and committed to a dissertation of quality which will be published in order to contribute to the production of usable knowledge in the field of the study.

2.7 Conclusion

This chapter highlighted the literature on postgraduate research supervision nationally and internationally. The literature review was presented under different subtitles, which included learning theories underpinning research supervision, such as the constructive learning theory, the cognitive learning theory and self-directed learning; different models of research supervision; scholarship development of research supervision; the drivers input of research supervision, such as research students, research supervisors and institutional support; the relationship between student researcher and research supervisor; the output of research

supervision, including skills and professional development; and the dissertation of a masters degree.

The next chapter describes the research methodology that was used in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research paradigm, approach and design that were selected for the study. The design includes the types of design, the setting and study population, a discussion of the sampling procedure, the tool that has been used to collect data, the validity and reliability of the instrument, how data was managed and analyzed, the ethical considerations, a dissemination of findings and the conclusion.

3.1 Research paradigm and approach

3.1.1 Positivist Paradigm

The research paradigm provides a frame of reference that guides the researcher from the beginning to the end of the research process. Paradigms are defined as patterns of beliefs and practices that regulate inquiry within a discipline such as nursing by providing focuses, frames and processes through which the investigation is accomplished (Weaver and Olson, 2005). According to Polit and Beck (2008), the research paradigm should help the researcher to sharpen the focus on the phenomenon of interest, but not to the extent that it limits intellectual curiosity. Paradigms that have been used in nursing research are positivism, post-positivism, interpretive and critical social theory (Weaver and Olson, 2005). This research study is based on the positivist paradigm.

The research paradigm encompasses a set of philosophical beliefs that guides the researcher's approach to the inquiry (Polit and Beck, 2008), such as ontology, epistemology and axiology,

which help to understand the phenomenon of inquiry. A scholar defines a paradigm through a series of axioms specifying the paradigm's perspective on the nature of reality (ontology), the relationship of the knower to what is known (epistemology), the possibility of generalization, the possibility of causal linkages, quality criteria, the role of values in inquiry (axiology), and specified methods particular to the paradigm is (Paley, 2011).

The ontological question is about what is the nature of the reality? The positivist researchers believe that the reality or truth exists in the real world and is driven by real natural causes (Polit and Beck, 2008, Weaver and Olson, 2005). Thus, the reality on research supervision in nursing exists, can be studied and be known by exploring perceptions of coursework masters nursing students in a selected university, as the research project constitutes main part of their degree. This was also asserted by Polit and Beck (2008) who argued that the fundamental assumption of positivist researchers is that the reality out there can be studied and known.

To answer the epistemological question on how the inquirer is related to those being researched, according to the positivist paradigm, the researcher is independent from those being researched (Polit and Beck, 2008). In present study, the findings had been collected from the coursework masters nursing students, who independently provided their perceptions regarding research supervision by means of a structured questionnaire. Therefore, the findings are not influenced by the researcher, and can be generalized.

The axiology clarifies the role of values in inquiry. To find the truth, a positivist researcher must be completely objective, meaning that values, feelings and personal perceptions cannot enter into the measurement of the reality (Burns and Grove, 2009). The researcher needs only the right instrument to measure the truth. By holding values and biases in check, the inquiry can be viewed objectivity, which increases the confidence of the positivist researcher (Polit and Beck, 2008).

The positivism paradigm was chosen in this study because the researcher believed that the reality on research and research supervision can be studied quantitatively without being influenced by the researcher's values. The findings obtained from the coursework masters nursing students can be used to inform the stakeholders in input, process and output of research supervision in the discipline of nursing.

3.1.2 Quantitative approach

The quantitative approach is suitable for this study because this study is framed by the philosophical views underpinning positivism. The quantitative approach begins with preconceived ideas about how the concepts are interrelated, uses structured procedures and formal instruments to collect data, analyses numeric information through statistical procedures and incorporates deductive reasoning (Brink, Walt and Rensburg, 2006). The quantitative researchers move in an orderly systematic fashion by which the investigator progresses logically through the series of steps, according to a pre-specified plan of action (Polit and Beck, 2008). The investigators are reductionists, meaning that they are involved in breaking the whole into parts, so that the parts can be studied (Burns and Grove, 2009).

3.2 Research design

Non-experimental, descriptive and cross sectional design guided this study. The research design is an overall plan for addressing a research question, including specifications for enhancing the study's integrity (Polit and Beck, 2008).

Non-experimental design has been used in this study for the purpose of describing a phenomenon of research supervision in detail, explaining relationships and differences among variables, and predicting relationships and differences among variables (Schmidt and Brown, 2012). A descriptive and cross-sectional design has been used to provide information

on research supervision in the discipline of nursing, a phenomenon of which little is known (Schmidt and Brown, 2012). A cross-sectional study examines data at one point in time, that is, data collected on only one occasion with the same subjects, rather than with the same subjects at several points in time (LoBiondo-Wood and Haber, 2010). Correlations are reported if the researcher wants to determine relationships between variables (Schmidt and Brown, 2012).

In this study, data was collected on only one occasion from coursework masters nursing students and the data was examined at one point in time. The study described coursework master's nursing students' expectations of their supervisors and themselves as part of the process in conceptual framework. The perceptions on research supervisors were correlated with socio-demographic and academic characteristics. In addition the output of research supervision was described and correlated with academic data of respondents.

3.3 Research setting

The study was conducted at the School of Nursing and Public Health at a selected university, in KwaZulu-Natal. Polit and Beck (2008) define a research setting as a physical location and condition in which data collection takes place in the study. The School of Nursing falls under the College of Health Sciences. In the school of interest, the curriculum of coursework masters program comprise a total of 192 credits, including the research project of 96 credits and 96 credits of coursework (College of Health Sciences, 2013). The College requires that full-time students doing the coursework masters degree are registered for a minimum period of two consecutive semesters, equivalent to one academic year and part-time students for four consecutive semesters, equivalent to two academic years (College of Health Sciences, 2012). The coursework masters programs provided in that school are critical care and trauma nursing, psychiatric/mental health nursing, community health nursing, advanced midwifery

and women and child health, nursing education, and health services administration (College of Health Sciences, 2012).

3.4 Study population, sample and sampling method

Polit and Beck (2008) define a study population as all the individuals or objects with common characteristics. In this study, the population consisted of all coursework masters nursing students who were registered for a research project module at the School of Nursing and Public Health within the selected University in KwaZulu-Natal during the academic year 2012. The total population was 81 students.

A sample is a selected group of subjects that is representative of all eligible subjects (Schmidt and Brown, 2012), while a sampling method is a process of selecting a group of people that represent the population of the study (Burns and Grove, 2009).

Convenience sampling was used to select the sample. This method is performed by selecting all participants who are available or accessible during the data collection period (Schmidt and Brown, 2012). Thus, the sample was the same as the total population excluding the researcher. Therefore the sample was 80 students.

3.4.1 Inclusion criteria

Inclusion sampling criteria are those characteristics that a subject must possess to be a part of study population (Burns and Grove, 2009).

In this study the sample included all masters nursing students who:

- ❖ Were registered on a research project in the coursework master's program 2012;
- ❖ Were accessible during the period of data collection;
- ❖ Were willing to participate in the study; and

- ❖ Who had been working with their research supervisors for a minimum period of 5 months. This criterion is justified by the fact that the minimum period for master's students to do a research project at the selected university is 10 months, and students expecting to finish on time should at least be at the stage of presenting their proposal.

3.4.2 Exclusion criteria

Exclusion sampling criteria are those characteristics that cause a person to be excluded from the study population (Burns and Grove, 2009). In this study, coursework masters nursing students were excluded if they:

- ❖ Were registered in academic year 2012, but were not yet registered on a research project;
- ❖ Were registered on a research project, but not accessible during the data collection period (July, August, and September, 2012); and
- ❖ Were registered on a research project, but not willing to participate in the study.
- ❖ The researcher was also excluded from being a participant.

3.5 Data collection instruments

The data collection instrument that was used in this study has four main sections. Each of the sections is briefly described below.

3.5.1 Socio-demographic information

The first section (items 1-8) covered the socio-demographic and academic characteristics of the participants, including age, period the student has been of working with the research supervisor, gender, marital status, mode of attendance (full time or part time), status of registration (national or international student), previous academic qualification, and current nursing specialization at masters level (See appendix 1).

3.5.2 Perceptions on the role of students themselves during research supervision process

This section (items 9-20) consisted of 12 items regarding the expectations of nursing student researchers (See appendix 1). This part described the perceptions of coursework masters nursing students on their role during the research supervision process. The instrument was borrowed and adapted from the owner (see appendix 7) and was validated by researcher and educational experts (Lekalakala-Mokgele, 2008). It had been used in previous study done in South Africa to measure expectations of nursing master's students regarding their role on research supervision.

3.5.3 Perceptions of research supervisors and Institution support

The Postgraduate Research Experience Survey (PRES) questionnaire of the Higher Education Academy, Lancaster University, was adapted to measure the perceptions of coursework masters nursing students of research supervisors during research supervision process and consisted of 16 items (items 21-36) (See Appendix 1), There were a further 11 items (items 37-47) measuring institutional support (See Appendix 1).

3.5.4 Perceived output from research supervision

This section consisted of 7 items (items 48-54) which had been adapted from the PRES questionnaire of the Higher Education Academy in UK to measure the perceptions of coursework masters nursing students on their growth from research and research supervision process (See Appendix 1).

3.5.5 Validity and reliability of the tool

Validity and reliability are closely related, and the researcher needs to consider both of these qualities when selecting a research instrument as it is possible that an instrument can be used

to collect reliable data, but does not guarantee that the data collected are valid measures of the phenomenon being studied (Brink et al., 2006, Burns and Grove, 2009).

3.5.5.1 Validity of instruments

The validity of an instrument refers to the degree to which an instrument measures what it is supposed to measure, given the context in which it is applied (Brink et al., 2006, LoBiondo-Wood and Haber, 2010, Schmidt and Brown, 2012).

The content validity of the questionnaire to be used in determining how students perceived their role had been insured by submitting the questionnaire to research and education experts (Lekalakala-Mokgele, 2008). Furthermore, the literature review assisted to adapt the content of the questionnaire in the context.

It had five main parts. The first part was composed by the socio-demographics and academic characteristics of respondents (age, period of research supervision, gender, marital status, mode of attendance, status within the university, previous qualification, and specialisation in nursing at masters level. The second part was composed by eleven items regarding perceptions of postgraduate students on their expectations to research supervision process. The third part was composed by sixteen items about students' perceptions to their research supervisors. The fourth part measuring the institutional support was composed by eleven items, The last part was composed by seven items and measured the output from research supervision process. Except the items of the first party of the questionnaire, all other items were in likert scale ranging from strongly disagree, moderately disagree, moderately agree, and strongly agree. The content validity was ensured by measuring the objectives of this study against the framework and items of instrument (See table 1 below).

Table1: Summary of content validity: Objectives and Measurements

Research objectives	Conceptual framework	Item for measurement
To describe perceptions on expectations of coursework masters nursing students to research supervision process	PROCESS	Self-administered questionnaire on expectations of masters students Part 2: Item 9-19
To explore the relationship between characteristics of coursework masters nursing students and the perceived nature of support from research supervisors.	INPUT AND PROCESS	Self-administered questionnaire with items 20-35 together with the part 1 of socio-demographic and academic characteristics item 1-8
To describe support expected from the institution by coursework masters nursing students during the research supervision process.	PROCESS	Self-administered questionnaire with item 36-40: intellectual climate; and 41-46: infrastructure.
To explore the relationship between academic characteristics of coursework masters nursing students with perceived output from research supervision	INPUT AND OUTPUT	Self-administered questionnaire with items 47-53 together with the part 1 of academic characteristics items 1-8.

3.5.5.2 Reliability of instrument

The world of a researcher with human subject is not perfect, the researcher develops a number of techniques to estimate the reliability of the instrument, that is the degree of error in measurement (Vithal and Jansen, 2010). One such technique is called the Cronbach's Alpha coefficient, the test mostly frequently used to establish internal consistency (Brink et al., 2006), by which +1.00 indicates perfect reliability and 0.00 reflects the absence of reliability (Schmidt and Brown, 2012, Vithal and Jansen, 2010).

One of the instruments used in this study was the Postgraduate Research Experience Survey (PRES), which had been used in previous studies done in UK, Australia and Ireland. It was found that the PRES questionnaire was a reliable instrument, through both exploratory and confirmatory factor analysis, that had strong construct validity when used to measure the research experience of masters nursing students (Drennan, 2008, Drennan and Clarke, 2009). It was a valid and reliable instrument to measure students experience in research supervision ($\alpha=0.91$), skills development ($\alpha=0.82$), infrastructure ($\alpha=0.82$) and intellectual climate ($\alpha=0.82$) (Abdullah and Evans, 2012). Another instrument was used to measure the expectations of postgraduate masters nursing students in South Africa. While its content validity was checked (Lekalakala-Mokgele, 2008), there was no test performed to measure the reliability.

The two questionnaires from different authors and different contexts have been adapted for this study and there was a need to conduct a pilot study to detect any ambiguity, misunderstanding and the reliability of the current instrument. The five coursework master's students participated in pilot study and were not considered in sample size for final findings. From the results of the pilot study, there were no ambiguous items or misunderstanding detected.

The Cronbach's alpha test revealed the following results: Expectations of coursework master's students ($\alpha=0.76$), research supervisor ($\alpha=0.91$), Intellectual climate ($\alpha=0.80$), Resources ($\alpha=0.74$), and Output ($\alpha=0.89$). Thus, the instrument was reliable for this study. According to Griffin-Sobel (2003), cited in Schmidt and Brown (2012), the typical reliability coefficients of 0.80 and above are acceptable for well-established instruments, while reliability coefficients of 0.70 and above are acceptable for a newly developed instrument. Vithal and Jansen (2010) argued that the higher the correlation coefficient is closer to 1, the higher the reliability of the measure and the lower the error of measurement. LoBiondo-

Wood and Haber (2010) mention that this calculation gives a researcher more confidence or evidence that the instrument will reflect the construct.

3.6 Data collection procedure

The researcher collected the data. Data collection commenced after ethical approval had been obtained from the Ethical Committee of University of KwaZulu-Natal (See appendix 4) and permission to conduct the study had been obtained from the Dean of the School of Nursing and Public Health. The researcher approached postgraduate administrators to get lists and contact details of all coursework masters nursing students registered on a research project in the 2012 academic year. The researcher collected data electronically via email as well as providing hard copies of the questionnaire with attached information document and informed consent. For students who answered online, the consent to participate was implied by returning the questionnaire. Participants were offered the opportunity to ask the researcher for more clarifications, either face to face, or via email or cell phone, depending on their choice. The data collection was done during a period of three months including July, August, and September of 2012.

3.7 Data analysis plan

Descriptive and inferential statistics will be analysed using the Statistical Package for Social Sciences (SPSS), Version 19. Descriptive statistics were used to describe and synthesise data (Polit and Beck, 2008), therefore descriptive statistics were used to describe and summarise socio-demographic, academic characteristics and perceptions of participants using percentages, frequencies, mean, standard deviation, mode and median.

To sum of items measuring perceptions at each dimension of the questionnaire was scored. Three levels of scores were formulated. Scores ranging between 80-100% indicated a high

level of perceptions, scores between 50-79.9% were designated as a moderate level and scores were designated as a low level.

Non-Parametric statistical tests were used to test relationship between perceptions and characteristics of the respondents because data were not normal distributed, despite the sample size above 50 (Polit and Beck, 2008). In many aspects of nursing, a phenomenon must be clearly described before predictions or relationships can be examined (Burns and Grove, 2009). The tables and histograms were displayed in presentation of data.

The categorical variables in this study (gender, marital status, nationality and type of studying (full or time, professional and academic qualification) were correlated with the nature of support perceived from research supervisors during research supervision using the Spearman's rho test, and the Kruskal- Wallis. Polit and Beck (2008) stated that the Chi-square (χ^2) test is a commonly used method for comparing frequencies or proportions among categorical variables (demographic and academic data) and is used to test the significance of the effect of one variable upon an outcome (E.g. To compare the period of research supervision and the mode of attendance).

To analyze the extent to which numerical variables (age, period of working with the supervisor) is associated with the perceptions of research supervisors, the Whitney *U* test was used because data was non-normally distributed. This test is a non-parametric test used to test difference between two independent groups and it is more powerful than median test because it throws away less information (Polit and Beck, 2008).

3.8 Data management

All the data collected will be used for the purpose of this study only. Hard copy completed questionnaires and computer data will be kept confidential, under lock and key. Data will be

stored during the study on a computer which has a code of access known only to the researcher. Paper will be shredded after a period of 5 years and data stored on the computer will be erased from both the programme files and the recycle bin.

3.9 Ethical considerations

It is important that research follows ethical procedures as there are international, national, organizational and individual factors in place to protect the rights of individuals (Schmidt and Brown, 2012). Thus, in nursing research, the subject participants in the study have rights, while nurse researchers are obligated to protect them. In this study, ethical considerations related to the protection of the rights of human subjects will underpin this study.

This study commenced when the research proposal was approved by the Research Ethics Committee of the University of KwaZulu-Natal (See appendix 4) and when permission was obtained from the Dean and Head of the School of Nursing and Public Health (See appendix 6). Polit and Beck (2008) state that a study conducted in ethical manner should adhere to the professional, legal and social obligations of the participants.

Various authors have identified three major principles to consider in a study dealing with human subjects and these include respect for persons, beneficence and justice (Brink et al., 2006, LoBiondo-Wood and Haber, 2010, Polit and Beck, 2008, Schmidt and Brown, 2012).

Respect for persons: The coursework masters nursing students, i.e. the study participants, are autonomous and had free choice in whether to participate or not, without the risk of penalty. The participants had the right to withdraw from completing the questionnaire at any time they wished and to ask clarification regarding the purpose of the study. Clarification was offered systematically by sending or providing the information document (See appendix 3) and informed consent (See appendix 2) with the questionnaire. Informed consent indicated that

participation was voluntary. Verbal explanations were given to participants face-to-face or telephonically wherever possible. Polit and Beck (2008) state that respect of human dignity encompasses people's right to make informed, voluntary decisions about participation, which requires full disclosure. Olson, 2003 cited in LoBiondo-Wood and Haber (2010) defines informed consent as a doctrine that determines and regulates participation in research.

Beneficence: The data collected in the study is used for the purpose of this study only, which is aimed to inform various stakeholders about research supervision in the discipline of nursing, in order to improve the quality of research supervision. The coursework masters students who agreed to participate in this study were provided with a questionnaire which took between 20 to 30 minutes to complete. Participants who were working were contacted by an agreed appointment in order not to disturb them at work and their decisions whether to participate or not were respected by the researcher. Beneficence is an obligation to do no harm and maximize possible benefits by treating participants in an ethical manner, respecting their decisions, and making efforts to ensure their well-being (LoBiondo-Wood and Haber, 2010, Schmidt and Brown, 2012). The protection from discomfort and harm involves emotional, economic, social or legal aspect (Brink et al., 2006).

Justice: All coursework masters nursing students were given an equal chance to participate in this study and were treated equally to avoid bias. Confidentiality and anonymity of the participant were ensured by not having any identification on the data collection tool. To ensure the anonymity of the participants, the informed consent contained no personal details and only needed a signature. The questionnaires were given numbers instead of names, so no information could be traced back to individuals. For those who answered online, the tool was downloaded and provided a code number and stored in folder on the laptop of the researcher, before coding provided information in SPSS. This is in accordance with LoBiondo-Wood and

Haber (2010), who suggest that to ensure anonymity, the subjects are given a code number for identification purposes instead of using names and that individual identities of subjects are not linked to the provided information to ensure confidentiality.

3.10 Dissemination of findings

The findings from this study will be disseminated to various stakeholders. A hard copy will be submitted to School of Nursing and Public Health at the University of KwaZulu-Natal while soft copies will be submitted to the Library of the University of KwaZulu-Natal and the South Africa Nursing Council. The findings will be also published by the researcher and the supervisor in accredited journals of nursing and/or education, such as the South African Journal of Higher Education.

3.11 Conclusion

This chapter outlined the research methodology that was followed in this study. It also highlighted the research paradigm, research approach and research design that were used, including the type of design. It described the research setting, study population, sampling procedures, research instrument, data collection procedures, data analysis plan, data management, ethical considerations and the dissemination of the findings.

The next chapter presented and analysed data from this study.

CHAPTER FOUR

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

4.0 Introduction

This chapter presents, analyses, and interprets the results of this study. The purpose of this study was to explore and describe perceptions of coursework masters nursing students on research supervision, in a selected university in KwaZulu-Natal. The data collection was done using two types of data collection tools that had been purposefully adapted for this study. The first was a tool that explored the expectations of masters students on research supervision and the other was the Postgraduate Research Experience Survey (PRES). A descriptive presentation of the socio-demographic and academic characteristic of participants has been done, followed by data on perceptions of students regarding research supervision.

The total population consisted of the 80 masters nursing students who were registered for a research project module in the academic year 2012 at the selected university in KwaZulu-Natal. Sample rationalization resulted in fifty-six (56) constituting the sample size for this study. This means the response rate was 70% of the total population of this study. Different authors assert that a response rate of 60% is acceptable return rate for survey research (Diem, 2002, Johnson and Wislar, 2012).

The primary outcome measures for this study were perceptions of coursework masters students in terms of their expectations of research supervision, research supervisors and institutional support, and their output perceptions of the research supervision process.

The analysis of findings was framed by the positivism paradigm for interpretation. Analysis was done using the Statistical Package for the Social Sciences (SPSS), Version 19.

Descriptive statistics such as percentages, frequencies, mean, median, and mode were used to describe data from this study. Spearman's rho test, Mann-Whitney's U Test and the Kruskal-Wallis Test were used to determine the relationship between socio-demographic and academic characteristics with students' perceptions of the research supervisor and output of the process. The Chi-square was used to determine relationship between the academic and demographic characteristics of the respondents. The result is significant if the probability of occurrence (P-value) is equal to or less than 0.05 level, with a confidence interval of 95%.

4.1 Description of the socio-demographic and academic characteristics of the sample

Demographic data in this study was composed by age, gender and marital status of the respondents, while academic data included the period of research supervision, mode of attendance, status within university, previous qualification and current specialization.

4.1.1 Age of respondents

The minimum age of respondents in the sample was 28years and maximum age was 61years with a range of 33years, median of 41.50, mode of 39 years old, mean of 43.02 years, and standard deviation [Std Dev] of 8.28. This showed that postgraduate students are adults and mature students. As it appears in the following histogram (Figure 2) below, since the mean, median, and the mode were different, the ages of respondents were not normally distributed, and were slightly positively skewed, since the mean ages appears to the right side of the median ages.

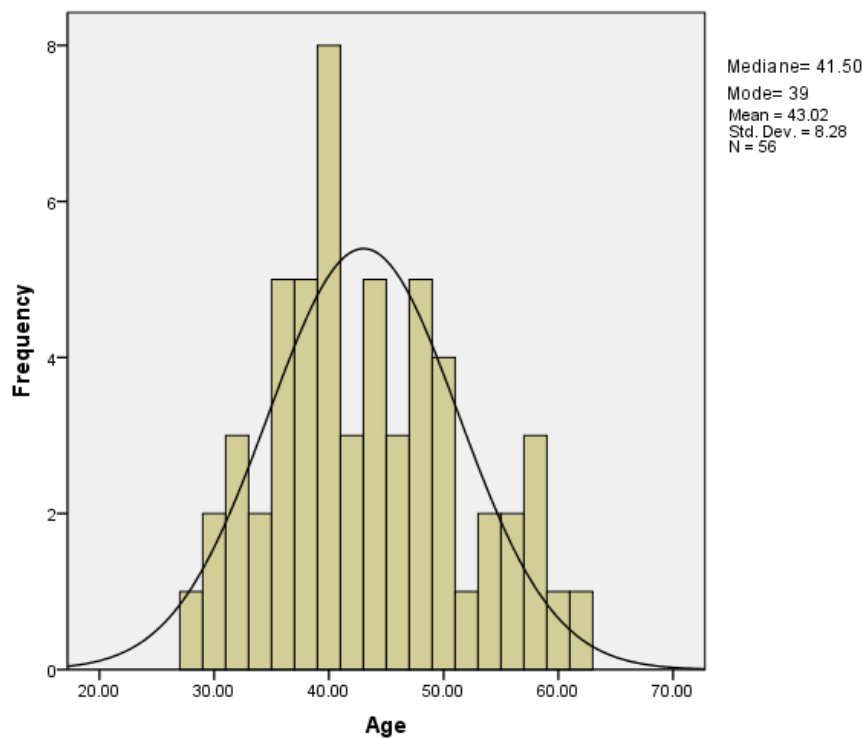


Figure 2: Age of respondents

4.1.2 Period of research supervision

The questionnaire requested that participants (98.21%; n=55) indicate the length of time they had been working with their research supervisors. The minimum period was 5 months, while the maximum period was 36 months (3years), with a range of 31months. The median was 14 months; the mode was 7 months, with a mean of 13.36 months and standard deviation of 7.191. As indicated by the following histogram (Figure 3) below, 14 participants had been under research supervision for 7 months, where 64.3% (9) were working on research methodology, and 35.7% (5) were on data collection and analysis. In addition, 55.3% (31) of the participants had been working with their research supervisors for more than 10 months. However, according to rule CR4 (College of Health Sciences, 2012), which refers to the period of registration for the coursework master's program, the expected period of working

with a research supervisor is two consecutive semesters for both full-time and part-time students, meaning 10 months of an academic year.

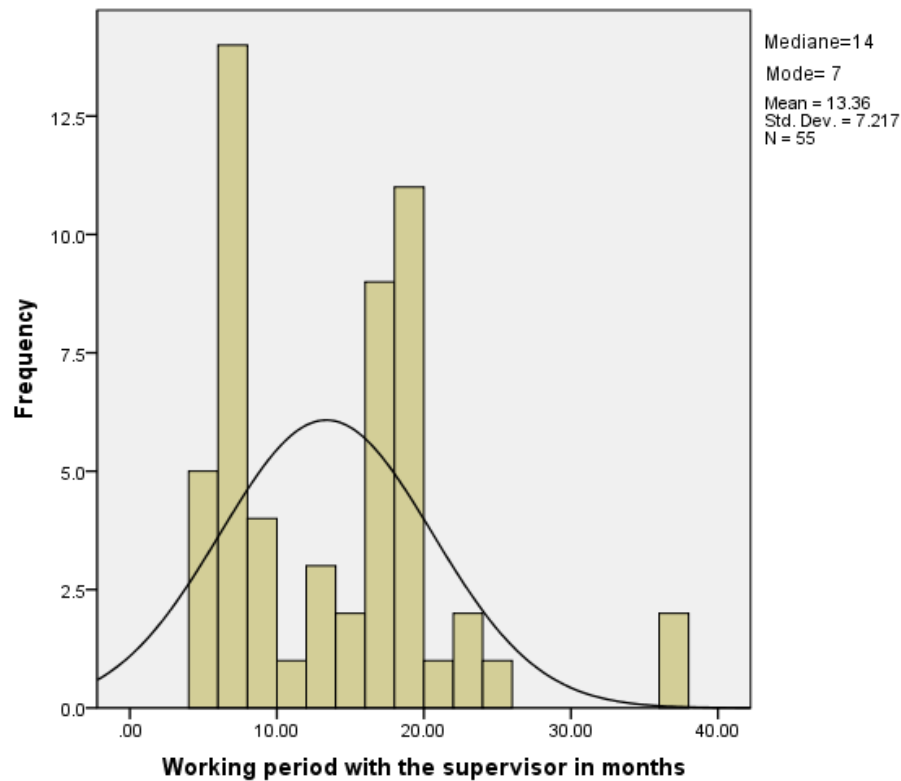


Figure 3: Period of research supervision

4.1.3 Gender of respondents

The largest proportion of the total sample was female ($n= 47$; 83.9%), with males representing only 16.1% ($n=9$) as presented in table 2 below. This is in line with the literature that indicates that the nursing profession has been dominated by females since the period of Florence Nightingale (Lou, Yu and Chen, 2010, Thomas, 1998 cited in Yang, Gau, Shiau, Hu and Shih, 2004).

4.1.4 Marital status of respondents

The findings indicated that the majority (69.6%; n=39) of the postgraduate students were married, 9 (16.1%) were divorced, 7 (12.5%) were single, and 1 (1.8) was widowed (See table 2 below).

4.1.5 Mode of attendance and status of respondents within university

Forty five (n=45; 80.4%) of the respondents were part time, whereas 11 (19.6%) were full time. The results of this study also revealed that 46 (82%) were national students, while 10 (18%) were international. (See table 2 below). This reflects that many postgraduate students have full time jobs and are studying part time at the university (Zhao, 2003). Furthermore, the institution of interest in this study is a World Health Organization (WHO) collaborative centre with a mandate to develop human resource in Africa, which account for the 18% international students.

4.1.6 Previous qualification of respondents

The majority of the sample (n=26; 46.4%) had a bachelor's degree, almost 10% (n=5) had a Bachelor of Nursing, Advanced Practice [BNAP], while 44.6% (n=25) had an honours degree (see table 2 below). This question was important to establish whether the students were at a level where they could undertake research independently, with minimal support.

4.1.7 Current specialization of respondents

Thirteen (n=13; 23.2%) of respondents were specializing in community health nursing, 12 (21.4%) in nursing administration, 10 (17.9) in nursing education, 8 (14.3) in critical care, 7 (12.5) in midwifery, and 6 (10.7%) in mental health nursing. There were more participants specializing in community health nursing and nursing administration than in any other field (See table 2 below).

Table 2: Socio-demographic characteristics of the sample

Socio-demographic variables	Attributes	Frequency	Percentages
Gender	Female	47	83.9%
	Male	9	16.1%
	Total	56	100%
Marital status	Single	7	12.5%
	Married	39	69.6%
	Divorced	9	16.1%
	Widow	1	1.8%
	Total	56	100%
Mode of attendance	Full time	11	19.6%
	Part time	45	80.4%
	Total	56	100%
Status within university	National	46	82%)
	International	10	18%
	Total	56	100%
Previous academic qualification	Bachelors	26	46.4%
	BNAP	5	8.9%
	Honours	25	44.7%
	Total	56	100%
Current nursing specialisation	Administration	12	21.4%
	Education	10	17.9
	Community Health	13	23.2%
	Mental Health	6	10.7%
	Midwifery	7	12.5%
	Critical Care	8	14.3%
	Total	56	100%

4.2 Description of students' perceptions of their expectations of the research supervision process

The questionnaire contained eleven items to assess the postgraduate students' perceptions of their expectations of the research supervision process, using a scale from 1, meaning strongly disagree [SD] to 4, meaning strongly agree [SA].

4.2.1 Description of items

Table 3 shows that 98.2% (55) of respondents agreed that they take initiative to raise difficulties with their research, with the mean of 3.69. This reflects self-directed learning at postgraduate level. The majority, 71.4% (40) strongly agreed that they maintain the progress of the work in accordance with the research supervisor, 21.4% (12) moderately agreed, but 7.2% (4) moderately disagreed, with a mean of 3.64 the statement. The results revealed that more than a half of respondents, 58.9% (33) strongly agreed that they submitted the proposal to the supervisor in accordance with the deadline, 33.9% (19) moderately agreed, whereas 3.6% (2) moderately disagreed and 3.6% (2) strongly disagreed, with a mean of 3.48. Just over half of respondents, 53.5% (30) strongly agreed and 28.6% (16) moderately agreed that they informed the research supervisor if they would be absent for any reason. However, 16.1% (9) moderately disagreed and 1.8% (1) strongly disagreed with this statement, giving a mean of 3.33.

To ensure good academic progress, the postgraduate students are expected to play an important role in accepting certain responsibilities for their progress and a successful research journey. The results of this study revealed that the majority of respondents 60.7% (34) strongly believed that they had familiarized themselves with all procedures and regulations concerning postgraduate work, while 39.3% (22) moderately believed in the statement, with a

mean 3.60. A large portion of respondents 83.9% (47) strongly agreed that, under guidance of the research supervisor, they had taken responsibility for the original contribution in developing the proposal, while 12.5% (7) moderately agreed and 3.6% (2) moderately disagreed with this statement, with a mean of 3.80. Thirty two (32; 57.1%) of the respondents strongly agreed that they had taken responsibility to familiarize themselves with latest developments, trends and controversy on their chosen topic, while 42.9% (24) moderately agreed with the statement, with a mean 3.57.

The results of this study revealed that 64.3% (36) strongly agreed that they are flexible in their thinking and take initiatives. Eighteen (n=18; 32.1%) moderately agreed, while 1.8% (1) moderately disagreed and 1.8% (1) strongly disagreed with this statement. A large percentage of the respondents (85.2%; n= 48) agreed that they develop informal contact with fellow postgraduate research students to discuss their research projects. The majority of respondents (94.6%; n=53) agreed that they understand the difference between guidance from the supervisors and being told step-by-step what to do.

However, only 16.1% (9) of the respondents strongly agreed that they attend all planned workshops on research methodology, while 42.9% (24) moderately agreed, 30.4% (17) moderately disagreed and 10.7% (6) strongly disagreed with this statement. This low uptake might be justified by the fact that many of respondents were studying part-time and it is difficult for them to attend with their full time work responsibilities.

Table 3: Students' perceptions regarding their expectations to research supervision process

Scores: Strongly disagree[SD], Moderately disagree [MD]Moderately agree [MA], and Strongly Agree [SA]	SD	MD	MA	SA	Total	Mean	Std. Dev
Percentage [%] Number [n]	% (n)	% (n)	% (n)	% (n)	% (n)		
Take the initiative in raising problems or difficulties with their research		1.8% (1)	26.8% (15)	71.4% (40)	100% (56)	3.69	0.50
Maintain the progress of the work in accordance with stages agreed with the supervisor		7.1% (4)	21.4% (12)	71.4% (40)	100% (56)	3.64	0.61
Submitted the proposal by the agreed deadline with the supervisor	3.6% (2)	3.6% (2)	33.9% (19)	58.9% (33)	100% (56)	3.48	0.73
Inform the supervisor when absent for different reasons	1.8% (1)	16.1% (9)	28.6% (16)	53.6% (30)	100% (56)	3.33	0.81
Familiarize themselves with all procedures and regulations concerning postgraduate work			39.3% (22)	60.7% (34)	100% (56)	3.60	0.49
Responsible for the original contribution to the development of the proposal whilst under the guidance of the supervisor		3.6% (2)	12.5% (7)	83.9% (47)	100% (56)	3.80	0.48
Take responsibility in familiarizing themselves with the latest developments, trends and controversy in the chosen topic			42.9% (24)	57.1% (32)	100% (56)	3.57	0.49
Flexible on their own line of thinking and initiatives	1.8% (1)	1.8% (1)	32.1% (18)	64.3% (36)	100% (56)	3.58	0.62
Develop informal contacts with peer postgraduate students on my own accord to discuss about research project		14.3% (8)	53.6% (30)	32.1% (18)	100% (56)	3.17	0.66
Understand the difference between guidance from the supervisor rather than being told step by step what to do	1.8% (1)	3.6% (2)	46.4% (26)	48.2% (27)	100% (56)	3.41	0.65
Attend all workshops planned for research methodology	10.7% (6)	30.4% (17)	42.9% (24)	16.1% (9)	100% (56)	2.64	0.88
Overall mean						3.51	

4.2.2 Students' levels of expectations of the research supervision process

All the scores of students' perceptions were added together to make an overall score which ranges from 11–44. Three levels of scores were formulated. Scores ranging between 80-100%

(scores between 35.20 and 44) indicated a high level of expectations of the research supervision process, scores between 50-79.9% (scores between 22 and 35.19) were designated as a moderate level and scores of < 50% (scores of 21.99 and below) were designated as a low level of expectations of the research supervision process.

The results revealed that, overall; respondents embraced what was expected of postgraduate students embarking on a journey of research under the guidance of a research supervisor. The majority of respondents (82.1%; 46) displayed that they had a high level of expectations of the process of research supervision, while 17.9% (10) had a moderate level. It was interesting to note that none of the respondents showed a low level, which revealed their commitment to their studies.

Table 4: Students' levels of expectations of the research supervision process

Levels of expectations	Frequency	Percentage
Low	0	0%
Moderate	10	17.9%
High	46	82.1%
Total	56	100%

4.2.3 Distribution of students' scores in relation to their expectations of the research supervisor process

Descriptive statistics showed that the minimum score was 29 and the maximum was 43, with a range of 14. The median scores were 38.00 and mode scores were 38.00, mean scores were 38.0179, and standard deviation (Std Dev) =3.222. The data was normally distributed since the mean, median, and mode scores were close to 38.00.as indicated by histogram (Figure 4.3).

The results revealed an overall mean of 3.51 out of 4, which means that the perceptions of 87.81% of the postgraduate students indicated that they had high levels of personal commitment to the process of research supervision. The sum of total scores out of 44 indicated a minimum of 29 and a maximum of 43, with the mean of 38. Therefore, as postgraduate students, respondents' perceptions in this study indicated a high level of self-directed learning. Maturity has an influence on the development of self-directedness (Yuan, Williams, Fang and Pang, 2012).

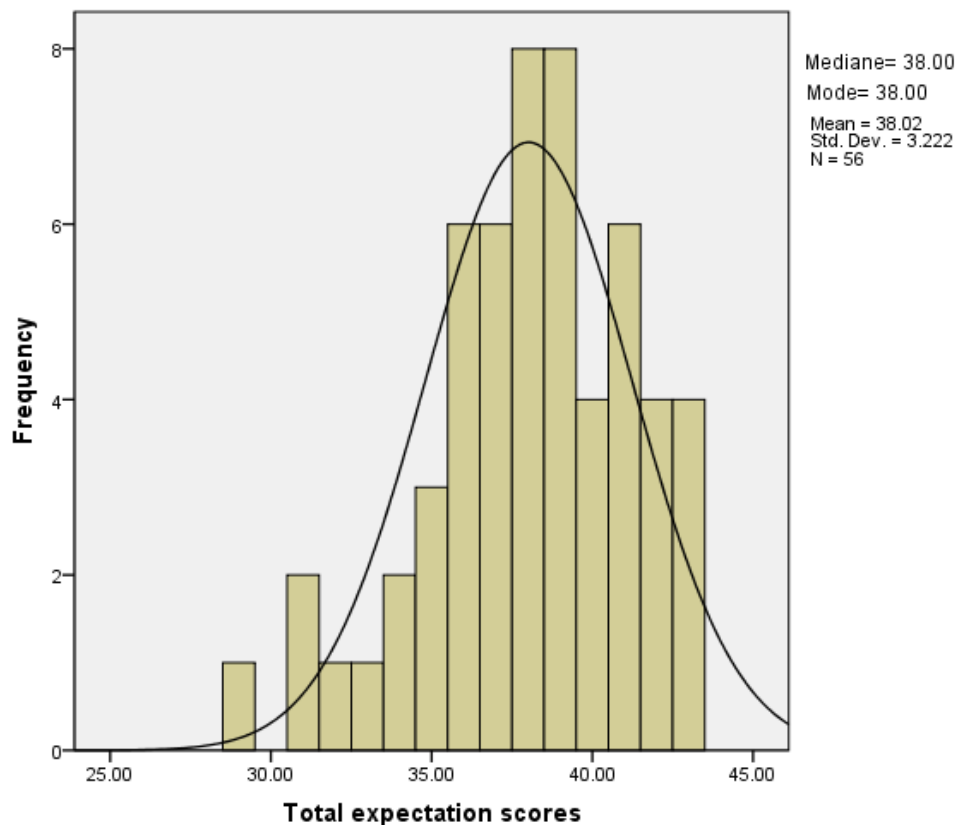


Figure 4: Students' scores of their expectations to the research supervision process

4.3 Students perceptions of research supervisors

The questionnaire contained 16 items to assess postgraduate students' perceptions of research supervisors. A scale from 1, meaning strongly disagree [SD], to 4, meaning strongly agree

[SA] was used. Although this was completed by all the respondents (56) various items were not rated because of their different stages of progress with their research projects. Some of the students were still in the process of collecting data and therefore items relating to the assistance of the supervisor in data analysis and report writing were not applicable for some respondents.

4.3.1 Description of items

4.3.1.1 Students' general perceptions of research supervisors

In this study, 60.7% of respondents strongly agreed that their research supervisors have the skills and subject knowledge to adequately support their research projects, 32.1% (18) moderately agreed with this statement, whereas 3.6% (2) moderately disagreed and 3.6% (2) strongly disagreed, with a mean of 3.50. More than a half of respondents,(66% ; n=37) strongly agreed that they had obtained guidance from research supervisors about the nature of the research project and the standards expected at masters level, 25% (14) moderately agreed, while 7.2% (4) of respondents moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 3.55 on the statement. More than a half of the respondents (55.3% ; n=31) strongly agreed that they had been given guidance on time frames so that their dissertation could be submitted on time, 33.9% (19) moderately agreed, but 5.4% (3) moderately disagreed, and 5.4% (3) strongly disagreed, with a mean of 3.39 on the statement. Less than half of respondents (41.1%; n= 3) strongly agreed that their research supervisors made effort to understand the difficulties they met, 44.6 (25) moderately agreed, whereas 10.7 (6) moderately disagreed and 3.6% (2) strongly disagreed, with a mean of 3.23 on the statement.

4.3.1.2 Students' perceptions on supervisors' guidance in the conceptual, designing and planning phase

Only 51.8% (29) of the participants strongly agreed and 33.9% (19) moderately agreed that they had been provided good guidance in selecting and refining the research topic, while 14.3% (8) moderately disagreed, with a mean of 3.37 to the statement. Only 37.5% (21) strongly agreed that they had been given guidance in formulation and refinement of the purpose and objectives of the study, whereas 53.5% (30) moderately agreed, 7.2% (4) moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 3.28 on the statement. Only, 30.3% (17) strongly agreed that they had been guided on the choice of the theoretical framework appropriate to their study, while 39.3% (22) moderately agreed, 28.6% (16) moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 2.28.

A quarter of respondents (25%: n=14) strongly agreed and 55.3% (31) moderately agreed that they had been guided by their research supervisors on the literature review to their study, while 16.1% (9) moderately disagreed and 3.8% (2) strongly disagreed, with a mean of 3.59. Less than half of the respondents (46.6% ; n=25) strongly agreed 41.1% (23) moderately agreed that they had been given good guidance on research methodology from their research supervisors, while 12.5% (7) moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 3.03. These statistics reflect that many participants were getting less support from research supervisors at this stage of the research project process.

4.3.1.3 Students' perceptions of supervisors' guidance in the empirical and data analysis phases

Only 62.5% (35) of respondents were at the stage of data collection. Of these, 22.8% (8) strongly agreed that they had received good guidance from their research supervisors in data

collection, 40% (14) moderately agreed, whereas 28.6% (10) moderately disagreed and 8.6% (3) strongly disagreed with a mean of 2.77.

Only 53.6% (30) of respondents had reached the stage of data analysis. Of these, 16.7% (5) strongly agreed that they had received good guidance from their research supervisors at this stage, 43.3% (13) moderately agreed, whereas 36.7% (11) moderately disagreed and 3.3% (1) strongly disagreed, with a mean of 2.73.

Only 50% (28) of the respondents were eligible to respond to the statement of report writing. Of these, 25% (7) strongly agreed that they had received good guidance from their supervisors on report writing, while 42.8% (12) moderately agreed, 28.6% (8) moderately disagreed and 3.6% (1) strongly disagreed, with a mean of 2.87.

4.3.1.4 Students' perceptions on feedback provided by research supervisors

More than a half of respondents, 62.5% (35) strongly agreed and 33.9% (19) moderately agreed that their research supervisors had provided helpful feedback on their progress, whereas 3.6 (2) moderately disagreed, with a mean of 3.59. However, only 33.9% (19) strongly agreed that they were getting feedback in reasonable time from their research supervisors, while 37.5% (21) moderately agreed, 26.8% (15) moderately disagreed, and 1.8% (1) strongly disagreed, with a mean of 3.03.

4.3.1.5 Students' perceptions about whether they have a professional relationship with the research supervisor

The majority of respondents (67.9%; n=38) strongly agreed that they had a professional relationship with their research supervisors, while 21.4% (12) moderately agreed and 10.7% (6) moderately disagreed, with mean of 3.9. Among respondents, 71.4% (40) strongly agreed and 21.4% (12) moderately agreed that they had not felt attacked by their research

supervisors while they were receiving feedback, whereas 3.6% (2) moderately disagreed and 3.6% (2) strongly disagreed, with a mean of 3.61.

4.3.1.6 Students' overall perceptions of research supervisors

The overall mean was 3.23 out of 4 for all statements regarding students' perceptions of research supervisors, which means 80.75%.

Table 5: Student' perceptions of research supervisors

Scores: Strongly disagree[SD], Moderately disagree [MD], Moderately agree [MA], and Strongly Agree [SA]	SD	MD	MA	SA	Total	Mean	Std. Dev
My supervisor/s have the skills and subject knowledge to adequately support my research project	3.6% (2)	3.6% (2)	32.1% (18)	60.7% (34)	100%(56)	3.50	0.73
My supervisor/s gives me guidance about the nature of the research project and the standards expected at masters level	1.8% (1)	7.2% (4)	25% (14)	66% (37)	100%(56)	3.55	0.71
My supervisor/s gives me guidance about the time frame so that dissertation may be submitted on time	5.4% (3)	5.4% (3)	33.9% (19)	55.3% (31)	100%(56)	3.39	0.82
My supervisor/s makes a real effort to understand any difficulties I face	3.6% (2)	10.7% (6)	44.6% (25)	41.1% (23)	100% (56)	3.23	0.78
I have been given good guidance in topic selection and refinement by my supervisor/s		14.3% (8)	33.9% (19)	51.8% (29)	100% (56)	3.37	0.72
I have been given guidance in formulation and refinement of purpose and objectives of the study by my supervisor/s	1.8% (1)	7.2% (4)	53.5% (30)	37.5% (21)	100%(56)	3.28	0.67
My supervisor guided me on the choice of the theoretical framework which is the most appropriate to the study	1.8% (1)	28.6% (16)	39.3% (22)	30.3% (17)	100%(56)	2.98	0.82
My supervisor/s provide helpful feedback on my progress		3.6% (2)	33.9% (19)	62.5% (35)	100%(56)	3.59	0.56
My supervisor/s gives me feedback in reasonable time	1.8% (1)	26.8% (15)	37.5% (21)	33.9% (19)	100% (56)	3.03	0.83
I have received good guidance in my literature search from my supervisor/s	3.6% (2)	16.1% (9)	55.3% (31)	25.0% (14)	100% (56)	3.02	0.75
I have received good guidance on the methodology of my project from my supervisor/s	1.8% (1)	12.5% (7)	41.1% (23)	46.6% (25)	100%(56)	3.27	0.75
I have received good guidance from my supervisor/s during data collection	8.6% (3)	28.6% (10)	40% (14)	22.8% (8)	100% (35)	2.77	0.91
I have received good guidance from my supervisor/s during data analysis	3.3% (1)	36.7% (11)	43.3% (13)	16.7% (5)	100%(30)	2.73	0.78
I have received good guidance from my supervisor/s during report writing	3.6% (1)	28.6% (8)	42.8% (12)	25% (7)	100% (28)	2.89	0.83
The relationship between supervisor and I has been purely professional		10.7% (6)	21.4% (12)	67.9% (38)	100% (56)	3.59	0.68
My supervisor gave feedback that did not make me feel like she is attacking me as a person	3.6% (2)	3.6% (2)	21.4% (12)	71.4% (40)	100% (56)	3.61	0.73
Overall mean of perceptions of research supervisors						3.23	

4.3.2 Summary of students' perceptions of support from research supervisors

All scores of student's perceptions of research supervisors were added together to make an overall score out of 64, and three levels of scores were formulated. Scores between 80-100%, (scores from 51.20 to 64) indicated a high level of support from the research supervisor, scores between 50-79.9% (scores from 32 to 51.19) indicated a moderate level and scores of <50% (scores of 31.99 and below) indicated a moderate level.

The majority of respondents (66.1%; n=37) perceived a moderate level of support from their research supervisors, while 32.1% (18) perceived a high level of support and only 1.8% (1) perceived a low level of support from the research supervisor.

Table 6: Levels of support received from research supervisors

Levels of support received from research supervisors	Frequency	Percentage
Low	1	1.8%
Moderate	37	66.1%
High	18	32.1%
Total	56	100%

4.3.3 Distribution of students' scores in relation to their perceptions of research supervisors

The minimum score was 30, which means a low level of support and the maximum was 64, which means a high level of support, with a range of 33, which indicated a big difference in students' perceptions in relation to support from research supervisors. The median scores were 47.00 and mode of 47.00, mean scores were 48.0714, standard deviation (Std Dev) =7.757). The distribution of scores on students' perceptions of research supervisors was not normally distributed and was positively skewed, since the mean is at the right side of the

median (Figure 5). Since the distribution was not normally distributed, non-parametric tests were used to correlate characteristics of respondents to respond to objective two of this study (See page 13).

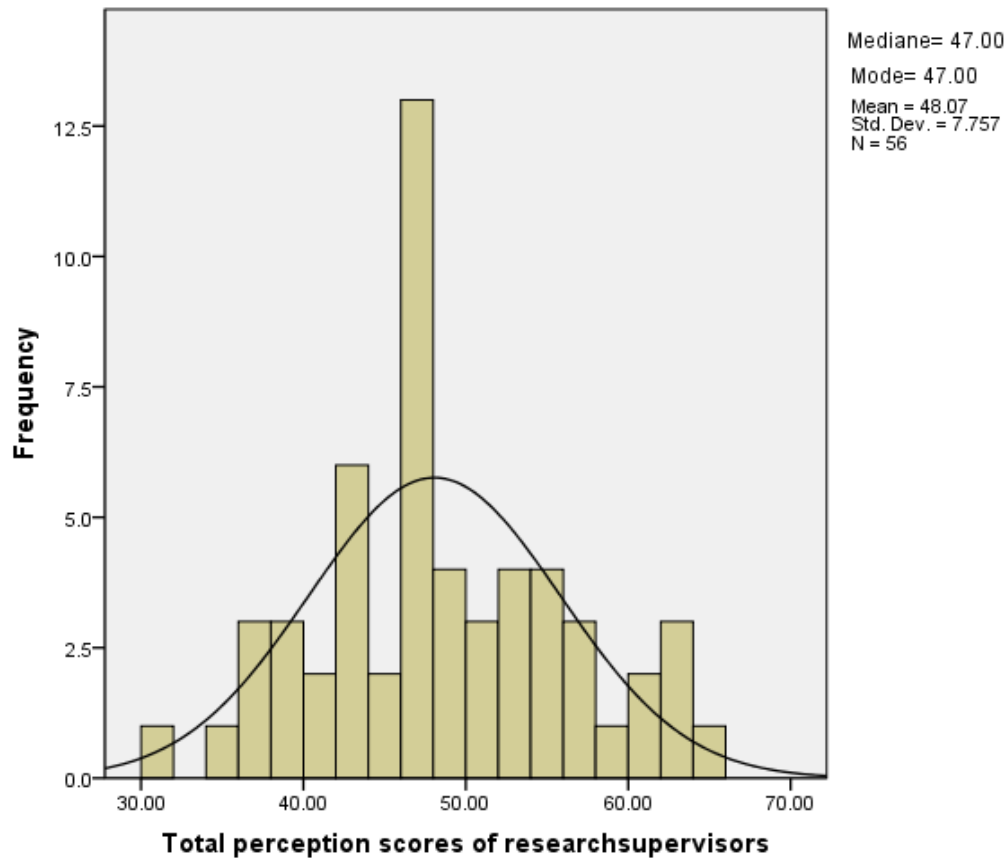


Figure 5: Students' scores in relation to their perceptions of research supervisors

4.4 Students' perceptions on the intellectual climate

4.4.1 Description of items on the questionnaire

There were five items on the questionnaire to assess students' perceptions of the intellectual climate as a source of motivation to work on their research projects. The scale is from 1, meaning strongly disagree [SD], to 4 strongly agree [SA].

Only 17.9% (10) of the participants strongly agreed that the school provided them with opportunities for social contacts with fellow researcher students, while more than a half of the respondents (53.6%; n=30) moderately agreed, 21.4% moderately disagreed and 7.1% strongly disagreed on the given statement. Only 12.5% (7) strongly believed that the school had provided them opportunities to become involved in the broader research culture, while half the respondents (50.0% ; n=28) moderately believed, a quarter (25% ; n=14) moderately disagreed and 12.5% (7) strongly disagreed with the given statement. Only 12.5% (7) strongly agreed that the research ambiance in their school stimulated their work, while more than half of respondents (53.6%; n=30) moderately agreed, 24.4% (12) moderately disagreed and 12.5% (7) strongly disagreed with the statement. Only 8.9% (5) of the respondents strongly agreed that they felt integrated into their school community, whereas half of the respondents (50%; n=28) moderately agreed, 32.2% (18) moderately disagreed and 8.9% (5) strongly disagreed with the provided statement. Only 19.6% (11) strongly agreed that their school provided good research seminars programs for them, whereas more than half of respondents (53.6%; n=30) moderately agreed, 21.4% (12) moderately disagreed and 5.4% (3) strongly disagreed to this statement.

Table 7: Students' perceptions on intellectual climate

Scores: Strongly disagree[SD], Moderately disagree [MD], Moderately agree [MA], and Strongly Agree [SA]	SD	MD	MA	SA	Total	Mean	Std. Dev
My school provides opportunities for social contact with other research students	7.1% (4)	21.4% (12)	53.6 (30)	17.9% (10)	100% (56)	2.82	0.81
My school provides opportunities for me to become involved in the broader research culture	12.5 % (7)	25.0% (14)	50.0% (28)	12.5% (7)	100% (56)	2.62	0.86
The research ambience in my school stimulates my work	12.5% (7)	21.4% (12)	53.6% (30)	12.5% (7)	100% (56)	2.66	0.85
I feel integrated into my school's community	8.9% (5)	32.2% (18)	50.0% (28)	8.9% (5)	100% (56)	2.59	0.78
My school provides a good seminar programme for research students	5.4 % (3)	21.4% (12)	53.6% (30)	19.6% (11)	100% (56)	2.87	0.79
Overall mean						2.71	

4.4.2 Summary of students' perceptions of the intellectual climate

All scores of students' perceptions of the intellectual climate at the school were added together to determine different levels and three levels of scores were formulated. Scores between 80-100%, (scores from 16 to 20) indicated a high level of intellectual climate at the school, scores between 50-79.9% (scores from 10 to 15.99) indicated a moderate level and scores of < 50% (scores of 9.99 and below) indicated a low level.

The majority of respondents (62.5%; n= 35) perceived the intellectual climate at the school at a moderate level, with only 26.8% (15) perceiving a high level and 10.7% (6) perceiving a low level.

Table 8: Level of intellectual climate at the school

Levels of intellectual climate	Frequency	Percentage
Low	6	10.7%
Moderate	35	62.5%
High	15	26.8%
Total	56	100%

4.4.3 Distribution of scores on intellectual climate

The maximum score was 20 and minimum score was 5, with a range of 15. The median score was 14.00, the mode scores was 15.00, mean total scores were 13.5714, with standard deviation [Std Dev]=3.28. As indicated by the histogram (Figure 6), the total scores on intellectual climate in school are positively skewed since the mean scores appear on the right side of the mean scores (See figure 6 below).

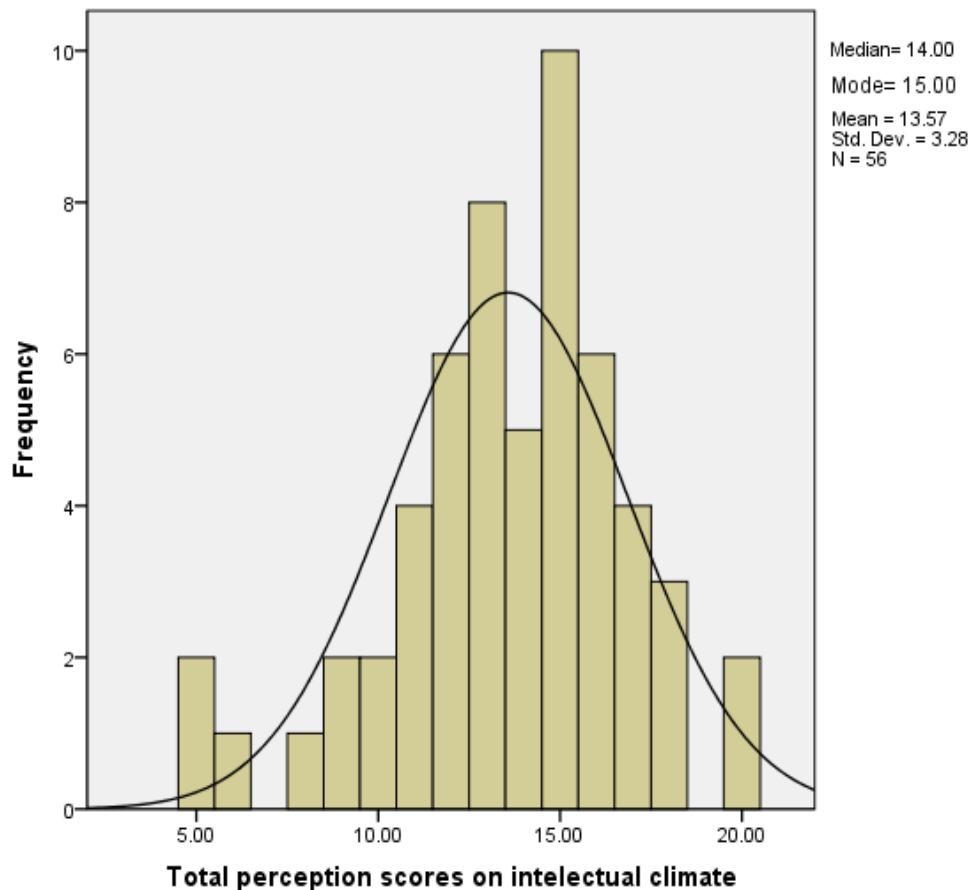


Figure 6: Students' perceptions of the intellectual climate at the school

4.5 Students' perceptions on institutional resources

Higher education institutions have a valuable role to play in providing the necessary resources to support postgraduate students and their research supervisors to progress in a research project. The questionnaire contained six items to assess postgraduate students' perceptions on resources available for support in their research projects. The scale ranged from 1 meaning, strongly disagree [SD] to 4, meaning strongly agree [SA]. The mean of each statement was computed out of 4.

4.5.1 Description of items

In this study, the majority of respondents (66.1%; n=37) strongly agreed and 32.1% (18) moderately agreed that they had access to necessary equipment for their research, but 1.8% (1) moderately disagreed, with the mean of 3.64. In terms of availability of suitable working places, 57.2% (32) strongly agreed, 33.9% (19) moderately agreed, whereas 8.9% moderately disagreed, with the mean of 3.48. However, in terms of finance, the majority of respondents were dissatisfied. A large proportion of the respondents (33.9%; n=19) strongly disagreed that they had adequate financial support for research activities and 19.6% (11) moderately disagreed, whereas a quarter of the respondents (25%; n=14) moderately agreed and 21.5% (12) strongly agreed, with a mean of 2.34.

Among respondents, 66.1% (37) strongly agreed that they have adequate provision of computing resources and facilities and 28.5% (16) moderately agreed, while 5.4% (3) moderately disagreed, with a mean of 3.61. A large proportion of respondents (69.6%; n=39) strongly agreed that they have adequate library facilities and 28.6% (16) moderately agreed, while 1.8% (1) moderately disagreed, with a mean of 3.68. More than half of respondents (58.9%; n=33) moderately agreed and 32.2% strongly agreed that they get the necessary technical support, whereas 8.9% (5) moderately disagreed, with a mean of 3.23.

The results revealed that students perceived that there were adequate library resources available to support them in their research projects with a mean of 3.68 out of 4, which means 92%. However, the lowest level of perceived satisfaction was in terms of finance available to support their research project, with a mean of 2.34 out of 4, which means 58.5%. Table 9 above shows that respondents tended to choose strongly agree and moderately agree on all resources, except the finance, with overall mean of 3.33 out of 4. This means that the

respondents were generally satisfied (83.25%) with the resources that were available at the institution to support their research project.

Table 9: Students' perceptions on resources

Scores: Strongly disagree[SD], Moderately disagree [MD]Moderately agree [MA], and Strongly Agree [SA]	SD	MD	MA	SA	Total	Mean	Std. Dev
I have adequate access to equipment necessary for my research		1.8% (1)	32.1 (18)	66.1% (37)	100% (56)	3.64	0.52
I have a suitable working space		8.9% (5)	33.9% (19)	57.2% (32)	100% (56)	3.48	0.66
There is appropriate financial support for research activities	33.9% (19)	19.6% (11)	25.0% (14)	21.5% (12)	100% (56)	2.34	1.16
There is adequate provision of computing resources and facilities		5.4 % (3)	28.5% (16)	66.1% (37)	100% (56)	3.61	0.59
There is adequate provision of library facilities		1.8% (1)	28.6% (16)	69.6% (39)	100% (56)	3.68	0.50
I have the technical support I need		8.9% (5)	58.9% (33)	32.2% (18)	100% (56)	3.23	0.60
Overall perceptions on resources						3.33	

4.5.2 Summary of students' perceptions on resources

Descriptive statistics were computed such as the mean, standard deviation, minimum, maximum, range and mode and levels were formulated to determine different levels of students' perceived satisfaction in relation to available resources to support postgraduate research projects. Scores between 80-100% (scores from 19.20 to 24) indicated a high level of satisfaction, while scores between 50-79.9 % (scores from 12 to 19.19) indicated a moderate level of satisfaction.

The results showed that, overall, the respondents of this study were satisfied with the availability of resources to support their research, where 50% (28) of the respondents

perceived a high level of available resources in their research and 50% (28) perceived a moderate level of available resources from the institution (See table 10 below).

Table 10: Levels of available resources

Levels of expectations	Frequency	Percentage
Moderate	28	50%
High	28	50%
Total	56	100%

4.5.3 Distribution of total scores on students' perceptions of available resources

Descriptive statistics showed that the maximum scores were 24 and minimum scores were 14 with a range of 10. The median scores were 19.00, mode scores were 19.00, mean total scores were 19.9821 on resources, with standard deviation [Std Dev]= 2.734.

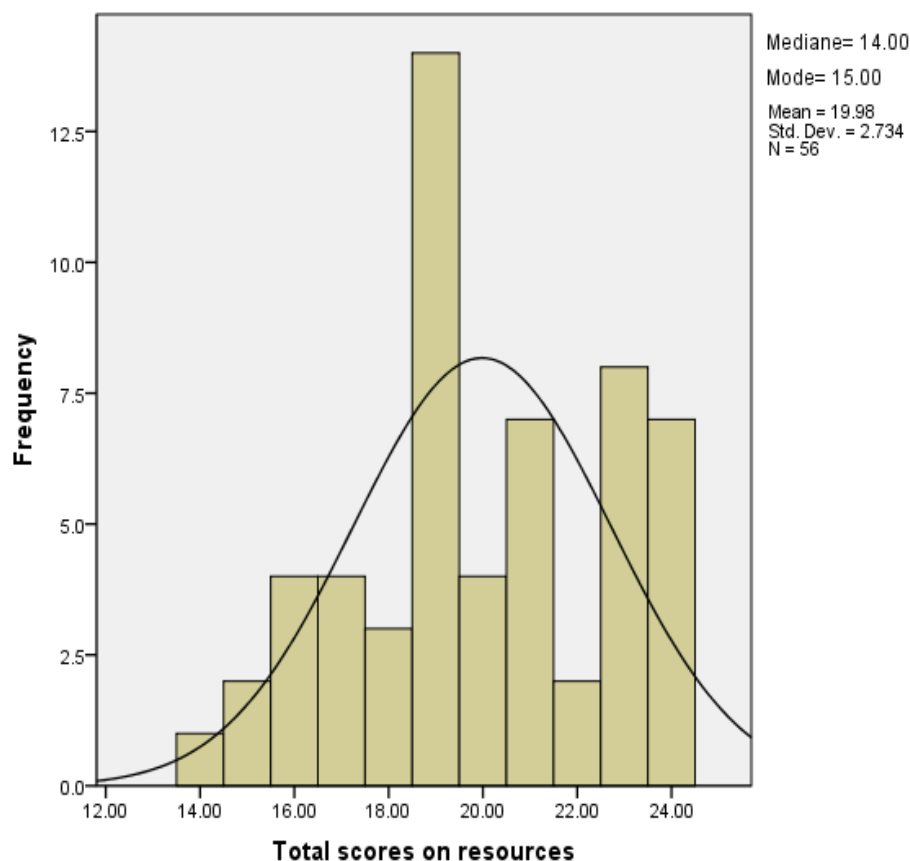


Figure 7: Distribution of total scores on perceived resources

4.6 Students' perceptions on output of research supervision

The output of research supervision is regarded as results from research supervision journey. The questionnaire contained seven items to assess postgraduate students' perceptions on output of research process. The scale ranged from 1 meaning, strongly disagree [SD] to 4, meaning strongly agree [SA]. The mean of each statement was computed out of 4.

4.6.1 Description of items

About 48.2% (27) of the respondents strongly agreed and 42.8% (24) moderately agreed that they had developed confidence in managing a research project, whereas 7.2% (4) moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 3.37. Among respondents, 55.4%

(31) strongly agreed and 42.8% (24) moderately agreed that they improved their analytical skills, while 1.8% (1) moderately disagreed, with a mean of 3.53. More than a half of respondents (62.5%; n=35) strongly agreed and 37.5% (21) moderately agreed that they had developed a range of communication skills as a result of their experience, with a mean of 3.62. The majority of the respondents (78.6%; n=44) strongly agreed and 21.4% (12) moderately agreed that they had improved their ability to learn independently, with a mean of 3.78.

Among respondents, 33.9% (19) strongly agreed and 51.8% (29) moderately agreed that through their experiences, they can supervise a simple, uncomplicated research project, but 12.5 (7) moderately disagreed and 1.8% (1) strongly disagreed, with a mean of 3.18. A large number of respondents (66.1% ; n=37) strongly agreed and 33.9% (19) moderately agreed that they had developed a number of transferable skills (e.g. academic writing, problem solving, networking, and identifying relevant resources, with a mean 3.66. Of the total number of respondents, 30.4% (17) strongly agreed and 57.1% (32) moderately agreed that they have been encouraged to pursue a career in research as a result of their experience, whereas 8.9% (5) moderately disagreed and 3.6% strongly disagreed, with a mean 3.14.

Table 11: Students' perceptions output from research

Scores: Strongly disagree[SD], Moderately disagree [MD]Moderately agree [MA], and Strongly Agree [SA]	SD	MD	MA	SA	Total	Mean	SD
As a result of my experience so far I feel confident about managing a research project	1.8%(1)	7.2% (4)	42.8% (24)	48.2% (27)	100% (56)	3.37	0.70
My experience so far has improved my analytical skills		1.8% (1)	42.8% (24)	55.4% (31)	100% (56)	3.53	0.54
My experience so far has helped me to develop a range of communication skills			37.5% (21)	62.5% (35)	100% (56)	3.62	0.48
As a result of my experience so far I have improved my ability to learn independently			21.4% (12)	78.6% (44)	100% (56)	3.78	0.41
Through my experience I can supervise simple, uncomplicated research project	1.8% (1)	12.5%(7)	51.8% (29)	33.9% (19)	100% (56)	3.18	0.71
During the research process I developed a number of transferable skills (e.g. academic writing, problem solving, networking, identifying relevant resources)			33.9% (19)	66.1% (37)	100% (56)	3.66	0.47
I am encouraged to undertake a career in research as a result of the research experience.	3.6%(2)	8.9% (5)	57.1% (32)	30.4% (17)	100% (56)	3.14	0.72
Overall mean						3.47	

4.6.2 Summary of students' perceptions on students research supervision output

All perceived scores on research supervision output were added together to determine different levels out of 28 and three levels of scores were formulated. Scores between 80-100% (scores from 22.40 to 28) indicated a high level of students research supervision output, scores between 50-79.9% (scores from 14 to 22.39) indicated a moderate level and scores < 50% (scores of 13.99 and below) indicated a low level.

By computing the total scores, 71.4% (40) of respondents perceived a high level of research supervision output and 28.6% (16) perceived the output of research supervision at a moderate level (See table 12 below).

Table 12: Levels of students research supervision output

Levels of output	Frequency	Percentage
Moderate	16	28.6%
High	40	71.4%
Total	56	100%

4.6.3 Distribution of total scores on students' perceptions in relation to outputs

The maximum scores were 28 and minimum scores were 18, with a range of 10. The median scores were 25.00, mode scores were 25.00, mean scores were 24.3036, with standard deviation [Std Dev= 2.669]. As indicated by the histogram (Figure 8) below, the total scores on output of research supervision were negatively skewed, since the mean scores appeared on the left side of the median scores. The determination of distribution was necessary to give guidance on the choice of statistical method.

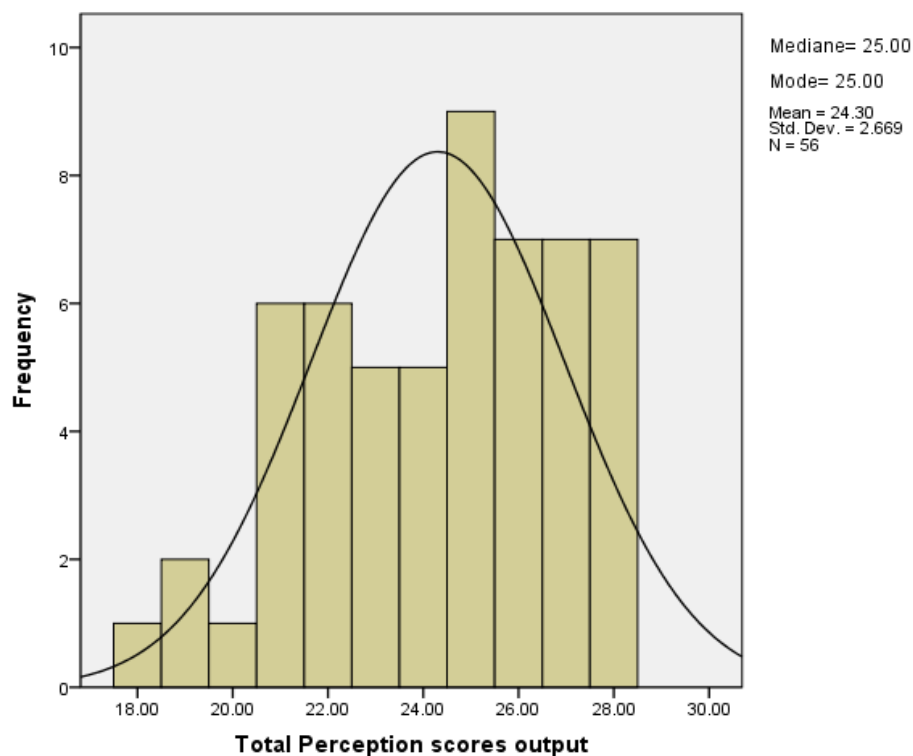


Figure 8: Distribution of total scores on perceived output

4.7 Correlations

To correlate variables, a P-value of 0.05 and below was considered as statistically significant

4.7.1 Correlations of respondents' characteristics with students' perceptions of research supervisors

Correlations were made to test relationships between socio-demographic and academic characteristics of respondents (age, supervision period, gender, marital status, mode of attendance, status within university, previous qualifications, and current specialization) and perceptions of research supervisors, the results of which responded to objective two of this study (See page 13).

4.7.1.1 Relationship between period of supervision and students' perceptions of research supervisors

To correlate the period of research supervision and students' perceptions of research supervision, the Spearman's rho test was computed, which gave result of $-.322$ and P -value of $.016$, indicating negative weak correlation since, according to Polit and Beck, the perfect correlation ranges from -1 to 1 (Polit and Beck, 2008). This means that the longer the period of supervision, the less satisfied the participants became with their research supervisors.

Table 13: Correlation of period of supervision and students' perceptions of research supervisors

Correlations			Period of supervision	Research supervisor
Spearman's rho	Period of supervision (months)	Correlation Coefficient	1.000	-.322*
		Sig. (2-tailed)	.	.016
		N	55	55
	Research supervisor	Correlation Coefficient	-.322*	1.000
		Sig. (2-tailed)	.016	.
		N	55	56
*. Correlation is significant at the 0.05 level (2-tailed).				

4.7.1.2 Relationship between mode of attendance and students' perceptions of research supervisors

To test the relationship between mode of attendance and students' perceptions of research supervisors, the Mann-Whitney U test was computed and the results were 143.000 with P-value of .031, meaning that there was a relationship between the mode of attendance and students' perceptions of support from research supervisors. The mean rank was 38.00 for full time students, and 26.18 for part time students, meaning that full time students perceived more support and guidance from research supervisors than part time students (See table 14 below).

Table 14: Correlation of mode of attendance and students' perceptions of research supervisors

Ranks					Test Statistic	
	Mode of attendance	N	Mean Rank	Sum of Ranks	Mann-Whitney U	143.000
Perceptions of research supervisors	Full Time	11	38.00	418.00	Asymp. Sig. (2-tailed)	.031
	Part time	45	26.18	1178.00		
	Total	56				

4.7.1.3 Relationship between status in university and students' perceptions of research supervisors

The relationship between status within the university and students' perceptions of support from research supervisors was computed by using the Mann-Whitney U test. The results were 139.000 for the test with P-value of .051. There was correlation between status within university and perceived support from research supervisors. Since the mean rank of international students was 37.60 and the mean rank of national students was 26.52, international students perceived more support from supervisors than national students (see table 15 below).

Table 15: Correlation of status in university and students' perceptions of research supervisors

Ranks					Test Statistic	
	Status within the University	N	Mean Rank	Sum of Ranks	Mann-Whitney U	139.000
Research supervisors	National students	46	26.52	1220.00	Asymp. Sig. (2-tailed)	.051
	International students	10	37.60	376.00		
	Total	56				

4.7.1.4 Other correlations

The findings in this study showed no relationship between characteristics of respondents (age, gender, marital status, previous qualifications, and current specialization) with perceived support from research supervisors since all results indicated a P-value above .05, which is the significant maximum level in this study (see table 16 below).

Table 16: No significant correlations

Respondent characteristics	Test used	P-value
Age	Spearman's rho test	.702
Gender	Mann-Whitney U test	.531
Marital status	Kruskal Wallis Test	.264
Previous qualification	Kruskal Wallis Test	.165
Current specializations	Kruskal Wallis Test	.942

4.7.2 Correlations of academic data and research output

Since the results are not normally distributed, non-parametric statistical tests were used to compare the relationship between independent variables (academic characteristics of respondents) and the dependent variable, which is perceived output for research supervision. The results from these correlations answered objective four for this study (See page 14).

4.7.2.1 Relationship between status in university and perceived output

To calculate the correlation of respondents' status within the university and perceived output from research supervision, the Mann-Whitney U test was performed, which gave results of 136.000 with *P*-value of .043. The results showed a correlation of status within university and perceived output of research supervision. Since the mean rank was 37.90 for international students and 26.46 for national students, international students perceived higher output from research supervision than national students (see table 17 below).

Table 17: Correlation of status in university and perceived output

Ranks					Test Statistic	
	Status within the University	N	Mean Rank	Sum of Ranks		
Total output	National students	46	26.46	1217.00	Mann-Whitney U	136.000
	International students	10	37.90	379.00	Asymp. Sig. (2-tailed)	.043
	Total	56				

4.7.2.2 Relationship between mode of attendance and status within university

Results showed that 78.6% (n=44) of the respondents were national students attending university on a part-time basis, while most of the international students (16.1% of the respondents; n= 9) were attending on a full time basis. Only 1 international student was studying part time (see table 18 below).

Table 18: Comparison of mode of attendance with status within the university

		Status within the University		Total
		National students	International students	
Mode of attendance	Full Time	3.6% (2)	16.1% (9)	19.7% (11)
	Part time	78.5% (44)	1.8% (1)	80.3% (45)
Total		82.1% (46)	17.9% (10)	100% (56)

4.7.2.3 Relationship between status within university and research supervision period

Correlations were made between status within university and the research supervision period, using the Chi-square test. The results indicated a significant relationship between the two compared variables since the P-Value was .040. International students tend to use a short period time with mean period of 7.7273 months, while national students take longer, with a mean period of 14.7727 months (see table 19 below).

Table 19: Correlation between status within university and research supervision period

Chi-Square Tests				Status within university	Mean supervision period
	Value	df	Asymp. Sig. (2-sided)		
Chi-Square	27.135 ^a	16	.040	Full time	7.7273
N of Valid Cases	55			Part-time	14.7727
*One respondent did not indicate her/his research supervision period out of 56.					

4.7.2.4 Correlations without significant relationship with perceived output

The results from this study indicated that there were no relationships between academic characteristics of respondents (research supervision, mode of attendance, previous qualification, and current specialisation) with the total output scores of research supervision, since the P-value was above .05, and only P-values of below .05 are only considered significant in this study (see table 20 below).

Table 20: Correlations with output research supervision without significant relationships

Respondent' characteristics	Test used	P-value
Period of supervision	Spearman's rho	.085
Mode of attendance	Mann-Whitney U	.110
Previous qualification	Kruskal Wallis Test	.118
Current specializations	Kruskal Wallis Test	.880

4.8 Conclusion

In this chapter, the researcher analyzed data by means of SPSS, Version 15 and by using different statistical tests such as frequencies, percentages, mean, mode, median and standard deviation. Non-parametric tests were used to test relationships between demographic and academic characteristics of respondents with students' perceptions of research supervisors. In addition the relationship was tested between academic data with perceived output from research supervision process. A p value of less than 0.05 was considered as statistically significant.

The overall the findings suggest that the majority of 82.1% (46) perceived a higher level of expectations to research supervision. The majority of respondents (66.1%) perceived moderate level of support from research supervisors. The moderate level was also perceived by the majority of 62.5% regarding the intellectual climate. The higher level was also perceived by 50% on available resources to support postgraduate research supervision, and by the majority of 71.4% in terms of output from research and research supervision process.

The period of research supervision, the mode of attendance and status within the university were identified as factors influencing perceptions of support from research supervision. In addition, only the status within the university was the one influencing factor to the output from research and research supervision process.

The next chapter contains a discussion of the findings, limitations of the study and recommendations for improving the quality of postgraduate research supervision.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The purpose of this study was to explore and describe perceptions of coursework masters nursing students on research supervision in order to inform the research supervision process in the discipline of nursing.

This chapter discuss the major findings from this study in relation to the conceptual framework and research objectives of the study. The discussion is supported by relevant literature. This chapter also discusses the limitations and the implication of this study for nursing education. The study outlines a number of recommendations for stakeholders of curriculum development for nurse educators, nursing education administration, nursing practice/education, and nursing research. This chapter ends with a conclusion.

5.1 Discussion of findings

5.1.1 Personal, social and academic characteristics of the sample

The characteristics of postgraduate students are factors that might influence their research and supervision process and the resulting output. These characteristics fall under the input section the knowledge management conceptual framework used in this study. These characteristics were also used to respond to objectives two and four of this study to explore their relationship with perceptions of research supervisors and output from research supervision process (see page 12).

In this study, the minimum age of respondents was 28 years old and the maximum age was 61 years old, with a mean age of 43.02 years old. The majority was generally older than in a study conducted in UK by Hodsdon and Buckley (2011) in which the majority (59.4%) was younger than 31 years old. In the context of South Africa, this difference reflects that many postgraduate students are older when they attend higher education due to their historical background. Jooste and Jasper (2010) assert that there is a unique educational need in South Africa arising from the apartheid legacy, which prevented black people from accessing higher education. Nevertheless, postgraduate students are adults and can be considered as self-directed learners, with the potential of becoming knowledge managers and scholars under the support from research supervisors.

Furthermore, the sample was predominantly female (83.9%). This is also in agreement with other studies conducted on postgraduate research supervision in the nursing discipline (Drennan, 2008, Drennan and Clarke, 2009, Lekalakala-Mokgele, 2008), which has been portrayed as a female profession since its foundation (Lou et al., 2010). The South Africa Nursing Council (2009) acknowledges that many marginalized groups have little access to tertiary education, and this includes women, those without the means to access further higher education and people who live in remote and rural areas. Thus, those who reach higher education could have multiple responsibilities and financial problems. These factors might hinder the progress of postgraduate nursing students in their research journey if the school doesn't put in place special support strategies to assist them.

The findings of this study indicated that the mean average period of research supervision was 13.36 months, with the majority of respondents (55.3%; n=31) having been working with their research supervisors for more than 10 months. This period is the expected time to complete a research project for the coursework program for both full-time and part-time students. This is an interesting aspect of this study. This results concur with those of Ramjith

(2012) in the study conducted in the same institution, who found that 60.86% of 2348 master's students who registered at a university between 2004 and 2010 had not completed their degrees by the end of 2011. Late completion negatively affects the postgraduate research supervision process, and students' self-esteem, which increase dissatisfaction and dropping out rate. Wright (2003) found that 79% of postgraduate students who completed within the expected time reported no difficulties with their research supervisors. Further, the high dropout thesis/dissertation based (56%) and the low completion rate (11%) at master's level were identified within the College of Health Sciences of the selected university (Tetty, 2010).

The results of this study revealed that the majority of the sample (82.10%) was national students, while 17.90% were international students. The rate of international students is low compared to a national survey conducted on postgraduate research experiences in UK where, according to Hodsdon and Buckley (2011), 41.3% of the participants were international. This reflects globalization, which has been a contributing factor to time completion for postgraduate research students. In light of this study, international postgraduate students tend to spend less time doing their research projects than national students, as indicated by results generated by Chi-square ($P\text{-value} = .004$). Similar results were found elsewhere. In the United States of America, completion rate among PhD students was 10% higher for international students than local students (Council of Graduate Schools, 2008) and in Australia where the mean average completion period was 3.9 years for international PhD students as compared to 4.4 years for national students (Jiranek, 2010). The author suggests different reasons behind this phenomenon, maintaining that higher standards of admission for international students than local students and pressure of visa restriction place pressure on international students to complete in the stipulated time frame. Undoubtedly, the same reasons could apply in this study and, therefore, there is a need of a study on this phenomenon.

About 80.4% of the respondents were part-time students in this study. Today, many postgraduate students are studying part-time at a university while still continuing with their full-time employment (Zhao, 2003). These results are similar to those from a study conducted by Lekalakala-Mokgele (2008) among masters nursing students in the same context of South Africa, where 95.5% were part-time, and the study conducted by Drennan and Clarke (2009), where 86% were part time in Ireland. However, in a national study conducted among postgraduate students in UK, 81% were full-time and 19% were part-time students (Hodsdon and Buckley, 2011). This difference is justified in the nursing context, where the majority of professional nurses are mature cannot participate in full-time studies for a variety of reasons such as affordability, staff shortage and multiple responsibilities (Lekalakala-Mokgele, 2008). This could hinder the progress of postgraduate students in the research supervision process in institutions which still use the face-to-face research supervision model.

5.1.2 Postgraduate students' perceptions of their expectations

Lekalakala-Mokgele (2008) argues that expectations cannot be separated from responsibilities and are crucial for the successful completion of dissertations. From the conceptual framework point of view, postgraduate students' perceived expectations of research supervision are regarded as part of the process to research supervision (see page 13). The description of postgraduate students' perceptions of their expectations responds to the first objective of this study.

In this study, it is interesting that the total of 98.2% of respondents strongly and moderately agreed that they take the initiative to raise difficulties with their research, which results are similar to those found by Lekalakala-Mokgele (2008) who found that 95.5% of the respondents agreed to raise problems related to their research. This reflects self-directed learning at postgraduate level. Yuan et al. (2012) found that senior students had higher level

of self-directed learning than junior students, and concludes that maturation influences the development of self-directedness. Self-direction is not isolated, but associated with openness to fulfil full potential (Aviram and Assor, 2010) such as becoming independent researchers.

The majority of respondents (71.4%) strongly agreed that they had maintained the progress of their work in accordance with the stages agreed to with the research supervisor and 21.4% moderately agreed to this statement (Total agreement=92.8%). These findings indicated that postgraduate students were willing to complete in expected time. The same results were found in another study among postgraduate nursing students, where 95.5% of the participants believed that they had maintained stages agreed to with the supervisors (Lekalakala-Mokgele, 2008). The majority of respondents in this study (92.8%) agreed that they had submitted the proposal in time to meet the deadline set with the research supervisors, and 82.1% (Strongly Agree and Moderately Agree [SA+MA]) agreed that they had informed the research supervisors about delays, which would allow good progress in the research project process. Lekalakala-Mokgele (2008) found that 100% of her respondents had informed their research supervisors when they would be absent. Furthermore, all respondents (SA+MA) in this study agreed that they familiarized themselves with all the procedures and regulations concerning postgraduate work and these results are also similar to those found by Lekalakala-Mokgele (2008). It could be pointed out that the respondents of this study were willing to communicate effectively with their research supervisors, which would have a positive impact on a successful postgraduate research process (Eley and Jennings, 2005, Wisker, 2005, Wisker et al., 2007).

The large portion of respondents (96.4%: SA+MA) agreed that they been responsible for the original contribution in developing proposals under the guidance of the research supervisor. In this study, all respondents (100%: SA+MA) agreed familiarising themselves with latest developments, trends and controversy on a chosen topic. This is in line with the view by

Bruce et al. (2011) that postgraduate students must be actively involved in discovering for themselves in order to obtain knowledge largely on their own. The results are similar to those in the study conducted by Lekalakala-Mokgele (2008), where all her respondents (100%) accepted their responsibility in developing the research proposals and keeping the supervisors updated on the chosen topic. Among respondents of this study, 96.4% agreed that, as postgraduate students, they were flexible in thinking and took initiatives. This is expected from adults learners to take initiative and be responsible for what occurs (Kobsiripat, Kidrakarn and Ruangsuan, 2011).

Among respondents, 85.2% (SA+MA) agreed that they developed informal contact with fellow postgraduate research students to discuss their research project. The study of Lekalakala-Mokgele (2008) showed that 91% (SA+MA) of the participants agreed that they had consulted their fellow research students on an informal basis. According to Vasuthevan and Viljoen, (2003), knowledge evolves through social negotiation and evaluation of viability of information. The intention is not necessarily making the same understanding, but rather to foster creativity based on diversity of ideas in order to produce integrated knowledge (Downes, 2010). Only 48.2% (27) of the participants strongly agreed that they understood the difference between guidance from the supervisors rather than being told what to do at each stage. It could be due to the fact that the majority of respondents were older than 40 years old, meaning that they had been socialized with the old traditional teaching method and there was a risk of taking their research supervisor as the all-knower regarding their research projects. While this can decrease their trust in the research supervisors, it can be controlled if there is a good relationship between the two parties involved in research supervision process.

Only 59% (33) of respondents agreed that they attended all planned workshops on research methodology. This low rate in attending planned workshops is associated with the fact that the majority of respondents are part-time students who have full time jobs. In addition, the

university advises students about workshops via email and during this year, the university changed its email address from GroupWise to Outlook, which had affected communication with the part-time students, who were not aware of the change. In addition, the school had not organized a program of research workshops at the beginning of the 2012 academic year so the students had no framework to work with. Despite the use of learning modules and workshops in research methodology, postgraduate students still encounter difficulties in their research journey (Ssegawa and Rwelamila, 2009) which justifies the need for support from research supervisors.

Overall, the majority of respondents (82.1%) perceived a higher level of their expectations of commitment to research and research supervision, with an overall mean of 87.81%, corresponding to higher level of perceived expectations. This reflects on how the respondents of this study are ready to embrace the self-direction to become independent researcher as it is expected to them according to South African Qualifications Authority (2010) by support from the research supervisors and institution.

5.1.3 Students' perceptions of research supervisors

In this study, the discussion of general perceptions of research supervisors is done, followed by their perceptions at each stage of research process, and then the sum of perceptions with factors associated are discussed at the end. According to Polit and Beck (2008) there are five stages of research process such as conceptual phase, designing and planning phase, empirical phase, analytic phase and dissemination phase, which is not explored in this study. Postgraduate research supervision through these phases requires research supervisors' expertise in research methodology, facilitation, management and communication skills (Wisker, 2005). A combination of these attributes help to satisfy postgraduate students and facilitate scholarship development for both students and research supervisors.

5.1.3.1 General perceptions of research supervisors

In this study, it is interesting that a large proportion (60%) of the respondents strongly agreed that their supervisors have subject knowledge and skills to adequately support their research project. These findings are higher than those of Lessing and Schulze (2003) who found that 47% of master's students acknowledged their research supervisors as people they could consult. Also, the majority of 66% of respondents strongly agreed that they have been guided on the nature of project and standards expected at master's level. However, only 55% of the respondents strongly agreed that supervisors provided guidance regarding the time frame for submitting their dissertations on time. This could be due to the workload and/or lack of expertise of research supervisors. Frenk et al. (2010) argue that the faculty challenges in the most countries of the world consist of heavy teaching loads, shortage of teachers and competing demands for research. It became evident that research supervisors do not always understand the difficulties of postgraduate students, as revealed by the majority (44.6%) of participants who moderately agreed with the statement. Yet, the degree to which a research supervisor takes students concerns seriously increases their trust (Segrott, McIvor and Green, 2006).

5.1.3.2 Guidance of research supervisors in the conceptual phase and the designing and planning phase

The conceptual phase of research process consists of formulating research problem, reviewing the literature, and determining the research purpose (Polit and Beck, 2008, Whittemore and Melkus, 2008). According to the same authors, the designing and planning phase consists of selecting a research design, developing study procedures, and determining sampling and data collection plan. This is the most challenging phase of research process for

postgraduate students (Ssegawa and Rwelamila, 2009), which means that they need more assistance from research supervisors.

It is particularly noteworthy that in this study, almost half of respondents (51.8%) were highly satisfied with guidance on topic selection and refinement. Moderate agreement was expressed by the majority of 53.5% regarding assistance from their research supervisors in the formulation and refinement of the purpose and objectives and 55.3% moderately agreed that their supervisors had provided good guidance on literature. In addition, the findings from this study revealed that the majority of 39.3% moderately agreed that they had received good guidance from the supervisor in their choice of an appropriate theoretical framework for the study and 30.3% strongly agreed to the statement. These results agree with those of Lessing and Schulze (2003), who found that 59% of master's students were satisfied with the support they received from research supervisors in terms of guidance in the choice of an appropriate framework of the study. As a matter of fact, some research supervisors are perceived as having little expertise in assisting postgraduate students in the conceptual phase of the research project process. Consequently, it seems reasonable to train research supervisors on how they can provide good guidance on this aspect of the research process.

The continuation of the conceptual phase is the designing and planning phase, which strongly depends on the previous stage. Winsett and Cashion (2007) assert that the research method shows the way to answer the question posed. Therefore, the right method for a study depends on the problem of the study, rather than the researchers, which requires strong knowledge of research supervisors to guide students on the right methodology. The findings of this study underscore the fact that only the majority of 46.6% of the participants strongly agreed that they had received good guidance on research methodology from their research supervisors. This study highlights that the majority of research supervisor were not strong in providing good guidance on research methodology.

The outcome of the conceptual phase and the designing and planning phase is a research proposal. In their study, Albertyn, Kapp, and Bitzer (2008) found that the majority of master students (75%) reported difficulty in writing a research proposal and research methodology. This means that masters students need assistance from research supervisors at this stage of research project process. If postgraduate students receive no or little guidance when they are working on their research proposal, many of them are choked (Ssegawa and Rwelamila, 2009). The same authors state that they get negative feedback from academics in their proposal presentation, they become discouraged and de-motivated toward the research process. Consequently this results in late completion of the degrees, with some even abandoning their studies.

5.1.3.3 Guidance of research supervisors in the empirical phase and the analytic phase

The empirical phase involves the data collection and the preparation of data for analysis, when the analytic phase consists of analysing data and interpreting the results (Polit and Beck, 2008, Whitemore and Melkus, 2008). The findings from this study revealed that the majority of 40% moderately agreed that they had received good guidance in data collection, and 22.8% strongly agreed to the statement. Also, the majority of 43.3% moderately agreed the good guidance from research supervisors on data analysis, and moderate agreement was perceived by the majority of 42.8% on report writing. It is remarkable that the majority of respondents in this study tended to perceive moderate guidance from research supervisors in the empirical and analysis phases of the research. Therefore, there is a need to build capacity of research supervisors on these phases of research process.

5.1.3.4 Students' perceptions of research supervisors in terms of relationship and feedback

It is notable that the majority of respondents perceived good relationships with their research supervisors. In this study, 67.9% of the respondents strongly agreed that they had a professional relationship with their research supervisor, and 71.4% did not feel any threat in receiving feedback. This shows that research supervisors do act as role models and this could be a source of motivation to continue in research career.

The feedback is embedded within a symbiotic relationship with research supervisors and is vital to the development of postgraduate students into independent researchers (East, Bitchener and Basturkmen, 2012). In this study, the majority of 62.5% strongly agreed that they received helpful feedback on their progress, which is considered a source of motivation. This means that the majority of respondents perceive their research supervisors as having facilitation skills to encourage them to achieve their full potential. Further, direct and comments challenging students thinking were more appreciated by the postgraduate students in a study conducted by East et al, (2012). However, with 37.4% moderately agreeing that they got feedback in reasonable time and only 33.9% strongly agreed on this statement. It seems that research supervisors are perceived as sometimes being late in providing feedback, with a risk of de-motivation for postgraduate students. This could be due the traditional face-to-face model currently used in a selected school while the majority of the respondents are part-time students with full-time jobs.

This study revealed that the total minimum scores of students' perceptions of research supervisors was 31, indicating a poor perceived level of supervision, while the maximum was 64, indicating a high level of expertise in research supervision. The range was 33, meaning that there was a big difference the performance of different research supervisors.

The sum of students' perceptions of research supervisors was correlated with socio-demographic and academic data to explore the factors influencing research supervision in order to respond to the second objective of this study. Spearman's rho test indicated the results of $-.322$ with P-value of $.016$, which indicated negative correlation. This suggests that the longer the time the students spend with their supervisor, the less capable they consider their supervisors to be. Effective research supervisors are those who guide and assist postgraduate students to complete in expected time.

However, this study revealed that the average period for completion is 13 months, with the standard deviation of 7.191. This means that the majority of respondents had already exceeded the expected time, which is 10 months. Students are required to register and pay for each year of their research project. In addition, the university loses funding from the government if the students don't graduate in the expected time, as stipulated in new funding framework for public higher education in South Africa (Department of Education, 2004). In light of these findings, there is a waste of resources for both students and the institution. This put an extra-burden on research supervisors, who have to supervise more students than expected with decreased funding. Thus, the scholarship development is compromised for both postgraduate students and research supervisors. McCormack (2004) asserts that difference between the expected and perceived research supervision is the major contributing factor to dissertation drop out.

This study revealed that there is a significant relationship between perceived research supervision and the mode of attendance (part-time and full-time). The Mann-Whiney U test indicated the result of 143.00 with P-value of $.031$. Full-time postgraduate students were more satisfied with their research supervisors with the mean rank of 38.00 than part-time students with the mean rank of 26.18. The same findings were obtained in correlating perceived research supervision and the status within the university (national and

international). The Mann-Whiney U test pointed out the result of 139.000 with P-value of .051. This means that international students have a better perception of the assistance they received from research supervisors with the mean rank of 37.60, than national students with a mean rank of 26.52. In this study, 9 out of 11 full-time students were international students, while 44 out of 46 part-time students were national students. This study underscores the fact that the traditional model of face to face supervision gives the advantage to full time students, but disadvantages part-time students (CHE, 2007, Zhao, 2003).

The traditional model is often characterized by slow throughput rates, unacceptable behaviour by research supervisors, disputes between students and supervisors and general lack of clarity on procedures and regulations for the supervision process (CHE, 2007). It is difficult for part-time students who employed full time to meet with their research supervisors during working days. Therefore, there is a need to shift from the face to face research supervision model to the online research supervision model to accommodate part-time postgraduate research students. Frenk et al. (2010) assert that the power of technology have to be exploited by high education institution. Nonetheless, this should be done with precaution because it requires expertise of research supervisors in both research skills, online facilitation skills, and computer skills. Further, both students and research should be sufficiently prepared for this model. To minimize the isolation, research seminars strategies must be encouraged to support this model.

There was no difference of students' perceptions on research supervisors in terms of gender, age and marital status. Nowadays, higher education institutions are accommodating all students without discrimination based on the age, gender and marital status due to the fact that adult students have internal motivation to pursue their studies and performance is obtained by their full potential engagement (Quinn and Hughes, 2007). Previous qualifications would not influence perceptions of research supervisors because postgraduate

students are recruited based on specified standards as stipulated in the handbook of the College of Health Science (2012). There was no difference in terms of current specialization, probably because postgraduate students in this study are assigned to research supervisors by the school without considering their specialization.

Overall, the majority of 66.1% of the respondents perceived a moderate level of their research supervisor's capacity to carry out the task of postgraduate research supervision. The findings revealed that only 32.1% perceived high level, while 1.8% perceived poor level. It is particularly noteworthy that there is a need for improving capacity of research supervisors at postgraduate level, as state different authors (Bitzer, 2012, Loureiro et al., 2010, Schulze, 2011, Trudgett, 2011, Wisker, 2005). It has been reported in the report of Deputy Vice Chancellor of the interested university of this study that the issue of capacity among research supervisors at postgraduate level is common within different schools (Makgoba, 2012).

Furthermore, the low capacity in research among nurse educators has been identified in the literature (Green et al., 2007, Priest, Segrott, Green and Rout, 2007, Segrott et al., 2006). Due to transformation of nursing education, higher education nursing schools are being challenged by capacity building of nurse educators, with a high need to develop staff and cultivate a research culture (Green et al., 2007). The reasons for limited capacity among nurse educators are the shortage of funding, the small number of qualified nurses with research degrees and experience, the low status of the nursing profession, negative attitudes and feelings toward research, and the nurse educator's inability to devote time to research due to the teaching load (Green et al., 2007).

5.1.4 Students' perceptions of the intellectual climate

Intellectual climate provides both social and academic integration of postgraduate students. To achieve such integration, the school has responsibility to fostering a sense of collegiality

among research students and academics, as well as be supported by individual research supervisors (Oxford Learning Institute, 2012) and administrators.

The findings of this study revealed that the majority of 53.6% moderately agree that the school provided them opportunities for social contacts with fellow students, with only 17.9% who strongly to the statement. These results are similar to those found in University of Sydney (2010), where 58% agree that the school provided them opportunities with fellow research students. The interested school of this study provides few opportunities for postgraduate students to exchange ideas on their research projects such as during proposal presentations. Frenk et al. (2010) emphasise the health professional education need to be transformed timely, with the provision of the opportunities for mutual learning. To foster the integration of part-time postgraduate students within a research culture of the school, Drennan and Clarke (2009) suggest the timetable of students-led research seminars and workshops from previous research dissertations, and their publications programs as well.

Furthermore, the cohort model for research supervision can be encouraged. This model of postgraduate research supervision provides a safe and critic space for learning to work together for postgraduate students (College of Health Sciences, 2013). The peer group comment on each other text (Samara, 2006) which prevent isolation of postgraduate students. This model creates enjoyable learning environment, supervisor can promote positive postgraduate students experience, and enhance group cohesion and active participation of supervisees (Mastoras and Andrews, 2011). However, the ambiguity of practice in this model is reported in the literature (College of Health Sciences, 2013, Mastoras and Andrews, 2011) and therefore its implementation requires the preparation for both research supervisors and postgraduate students.

The findings of this study highlights that the majority of 50.0% among the respondents moderately agreed that the school had provided them with opportunities to become involved in the broader research culture. The school has the responsibility to organise journal club, seminars and conferences by which students present their papers, and common room with facilities encouraging students to meet there (Oxford Learning Institute, 2012). Also, this study revealed that majority of 53.6% moderately agreed that the research ambiance in their school stimulated their work. Only the 58.9% (MA and SA) of participants of this study believed that they felt integrated into their school community. These finding concur with those found by Abdullah and Evans (2012) where the total agreement was on this item was 52.10%, and Hodsdon and Buckley (2011) found 54% felt integrated into the school.

The findings of this study revealed the overall mean of 67.8% on students' perceptions of the intellectual climate. Sharing knowledge, experience and problems are important aspects of developing a collaboration team in research (Priest et al., 2007). The successful development of research culture largely depend upon the quality of educators and their positive attitudes toward research (Peralta and Raju, 2012). However, the postgraduate students' perception of research culture in higher education is low compared to others aspects of research supervision. The poor teamwork is one of major challenges in professional education worldwide (Frenk et al., 2010). This can be explained by the fact that today there is a lack of unity in the lives of contemporary academics, leading to university fragmentation due to an obsession with accountability, standardization and managerial control in competitive society (CHE, 2007, Department of Education, 1997).

As a consequence, university life for students, academic staff, the managers and administrators who support their work, such as research supervision become increasingly fragmented (Rowland, 2002). This seriously affects postgraduate students as subordinates in the school system, compared to the given groups. The same author asserts that this

fragmentation lies between teachers and students, between teaching and research, and between teachers and administrators, leading to fragmented areas of knowledge and other aspect of teaching and learning practice. An overemphasis on accountability results from the pressure put on universities by the government diversely affects the nature of postgraduate research supervision and it is compared to colonial governments exploiting and oppressing the subjects of their dominion (Ministry of Education, 2001). However, this is being done for the common good, despite extra-work of academic staff. Rowland (2002) mentions that this trend is analyzed in relation to a global market economy and is guided by advanced technology and knowledge.

According to Firth and Martens (2007), the fragmentation of knowledge and increased specialization leads to the lack of balance between the rational and emotional in all, including postgraduate research supervision. Once intellectual climate is negatively affected, this might decrease commitment for both postgraduate students and research supervisors, who thus become de-motivated. Therefore, the school is responsible to support academics to cope with that pressure without damaging postgraduate supervision for transformation toward development of scholarship, such as formal training on effective research supervision.

Academic development opportunities attempt to reaffirm academic values into professional experience that is becoming increasingly incoherent, and promote new professionalism (Frenk et al., 2010, Rowland, 2002). The capacity building of research supervisors increases teamwork among academics and enables them to supervise students effectively. Thus, the academic development opportunities reshape new relationships between fragmented aspects of academic work because, since they have common vision, they accept and become committed to work toward a common goal, which is the purpose of the higher education (Bush, 2011, Rowland, 2002). Strong and effective leadership is essential to overcome

negative aspects of organisational life and promote a creative environment to facilitate the development of research capacity (Frenk et al., 2010, Rowland, 2002).

To conclude, Nurse educators hold a particular obligation to ensure that they are preparing professionals who are able to deal with present and future professional life by bridging the gap within educational programs and strategies (Thorne, 2006). According to Oxford Learning Institute (2012), the good intellectual climate prevents isolation, enhance student progress and support the supervisory role.

5.1.5 Students' perceptions of institutional resources

The higher education institutions play an important role by providing necessary resources to support postgraduate research students. From the conceptual framework point of view, the perceptions on institutional resources available to support postgraduate research projects were regarded as support of the research supervision process (Zhao, 2003).

The findings from this study revealed that the majority of respondents (66.1%) strongly agreed that they had access to equipment necessary for their research, followed by 32.1% who moderately agreed, with the mean of 3.64 out of 4 on the statement, which is 91%. In terms of availability of suitable working place, 57.2% strongly agreed, 33.9% moderately agreed, with the mean of 3.48 for the statement, which is 87%. These results are higher than those found by Abdullah and Evans (2012), where the mean response for access to necessary equipment was 4.15 out of 5, which is 83%, and the mean for availability of suitable working place was 4.03 out of 5, which is 80.6%.

Among respondents, 66.1% strongly agreed that they have been provided with computing resources and facilities, 28.5% moderately agreed, with a mean of 3.61, meaning 90.25%. Also 69.6% strongly agreed and 28.6% moderately agreed that they had adequate library facilities, with a mean of 3.68. More than half of respondents (58.9%) moderately agreed and

32.2% strongly agreed that they received the necessary technical support, with a mean of 3.23. The findings showed that the University is well equipped to support research students at a postgraduate level. Abdullah and Evans (2012) found the mean of 3.93 out of 5, which means 78.6% for adequate provision of computing resources and facilities, and 4.39 of adequate provision of library facilities, meaning 87.8%. Nevertheless, the problem of resources has been identified as a factor hindering postgraduate education in developing countries.

In developing countries, some universities are not able afford to subscribe to electronic academic journals to support their postgraduate research (Priest et al., 2007). This author reported that while postgraduate students are encouraged to use open access that is free of charge, their inadequate scholarly online communication skills and the slow internet were factors negatively affecting the use of open access. The same author reported that only 60.9% of the respondents had accessed and used the resources from open access for their studies. The perceived high level of available resources for respondents of this study does not mean the exploitation of those resources by the postgraduate students in their academic work. It has been found that postgraduate students preferred to use free online resources from Google and Wikipedia, despite the fact that the institution has sufficiently subscribed to online databases (Green et al., 2007). Therefore, this requires further investigation at postgraduate level.

However, students' perceptions in terms of finance tend to be low among respondents of this study. A large portion (53.5%; n=30) disagreed that they have not had appropriate financial support for research activities. These results are common in different studies carried out on postgraduate students' experiences on research supervision. In UK, Hodsdon and Buckley (2011) found that only 57.4% agreed that they had appropriate financial support for research activities, and Abdullah and Evans (2012) found 50.4% on the same statement. Thus, this

could negatively impact the progression of postgraduate student researchers toward completion of their research projects.

In general, students' perceptions about library resources are highly positive with the mean of 3.68 out of 4, which is 92%, while financial support to their research project has the lowest perception, with the mean of 2.34 out of 4, which is 58.5%. The most frequent responses on resources, except for financial resources, are 'strongly agree' and 'moderately agree'. All resources combined are positively perceived at the rate of 83.3%. The institution of interest for this study is a research lead university, which is well-equipped with resources for research performance of both students and staff. The library is equipped with printed and electronic materials, and academic software, such as endnote, SPSS and Nvivo are free for registered students and staff members. At the beginning of each year, the students have an orientation week, where they spend a day in library to inform them about the process of searching for available resources. In addition, there is an interlibrary loan office, where identified resources which are unavailable in the university library are obtained after a short period (Naidoo, 2012).

5.1.6 Students' perceptions on output of research supervision

The research journey at postgraduate level is expected to transform the candidate into an independent researcher and to develop transferable skills of lifelong learning. The findings of this study highlight that a great number of respondents (78.6%) strongly agree that the journey has improved their ability to lean independently. This number tends to decrease with only 48.2% strongly agreeing that they felt confident in managing research projects. Further, 51.8% moderately agreed that they can supervise a simple research project, with 14.3% who disagreed to the same statement. This percentage of 14.3 cannot be ignored, which is why

there is a need to improve this aspect in order to prepare future competent academics. Research supervision could be added in curriculum of nurse educators.

With regard to academic skills, 66.1% of the respondents strongly agreed that the research process helped them to develop academic writing skills, problem solving skills, networking and resources identification skills. These are transferable skills which are not only applicable to the present, but also to the personal and professional future lives of the candidates. The majority of 62.5% strongly agreed that the research journey improved their communication skills. The improvement is gained through their communication not only with the research supervisors, but also with fellow students and scholars. Further, in the school of interest in this study, postgraduate students (both masters and PhD) present their research proposals to a group of academics and fellow research students before they get permission to submit to the Ethical Committee of the university. The majority of 55.4% strongly agreed that their research journey had improved their analytical skills. The majority of 57.1% moderately agreed and 30.4% strongly agreed that were encouraged to undertake research career as results of research experience. Postgraduate students are expected to critically analyse information in order to find solutions to the problem for present and future life. Based on these findings, it seems reasonable that the greater number of respondents were motivated to undertake a research career.

The sum of total scores of output was out of 28. The maximum scores were 28 and minimum scores were 18, with a range of 10 and mean scores of 24.30. It is notable that the research journey positively impacted on the development of postgraduate students with a greater number of 71.4% of respondents who perceived a higher level of development.

In order to respond to objective four of this study, correlations were done between students' perceptions of output of research and research supervision with academic data of

respondents. In light of this study, it has been found that there is a significant relationship between the perceived output and the mode of attendance for both full time and part-time students. The Mann-Whitney U test was 136.000 with P-value of 0.43 showed that the full time students perceived the output of the research journey more positively than part-time students. This is justified by the fact that full time students have more time to explore and use resources available at the university than part time students. Nevertheless, the findings indicated that there is no significant relationship between the perceived output of research and research supervision with the period of research supervision, status within the university, previous qualifications and current specializations.

5.2 Limitations

This study has some limitations, mainly related to the sample, the research method used, instrument, scope, time and financial aspect.

The sample in this study was selected from a single discipline of nursing within a school of nursing and public health, and therefore the results cannot be generalized to all postgraduate students in KwaZulu-Natal and South Africa. The results of this study are informative in that they give descriptions of students' perceptions on research and research supervision, which adds a limited body of knowledge in this area and may serve as a foundation for future research on the same issues of postgraduate research supervision.

The sample size was small comparing to the other studies which have used the instrument of postgraduate research experience (PRES) at entire institutional and or national level among graduates. The findings from the previous studies using this type of questionnaire reported only the total agreements and disagreements together. This made the discussion and comparison of results a challenge because the researchers want to discuss results as they

were. Furthermore, despite the adaption to the context, some items on the questionnaire were not applicable, depending on the stage the student had reached. In addition, the small sample size can affect statistical tests and may hide significant results. Due to time and financial constraints, this research did not involve research supervisors for their information on the problem of the study. Furthermore, it was difficult for the research to reach participants in their working place despite their agreement and the postgraduate students were not given the opportunity to provide their lived experiences on the aspect of research and research supervision. This study did not investigate the publication aspect of the research supervision process because many of the participants were still working on their research project

5.3 Implication of the study

This study provides information on the perceptions of postgraduate students in the discipline of nursing, with research constituting the main component of coursework master's program. The study highlights the strengths and the weakness areas of postgraduate research supervision process from students' perspectives. Therefore, this study serves as the basis for the quality improvement of postgraduate research supervision.

5.4 Recommendations

The following recommendations are aimed to improve the quality of postgraduate research supervision.

Stakeholders of curriculum development for Nurse Educators

- To incorporate a research supervision module in the curriculum of the nursing education program to enhance the capacity of nurse educators to effectively carry out their postgraduate research supervisory role.

- To provide financial support to higher nursing education institutions in terms of strengthening capacity of nurse educators in research since their move to higher education is putting pressure on them as they were not trained for university.

Nursing education administration

Based on the findings of this study, the recommendations to education administration are the following:

- To train nurse educators on research supervision in order to increase their input to research supervision of postgraduate students and increase the output rate
- To revise policy regarding postgraduate research supervision and require both full-time and part time students to register their research projects at the beginning of their program in order to prevent isolation of part-time students who have full-time jobs and the risk of being disconnected of the university.
- To put in place strategic support strategies for special assistance to postgraduate nursing students to overcome barriers associated with their previous background as a large majority are black females, mostly from remote areas.
- To put in place a clear framework of research workshops to strengthen the research capacity for both postgraduate students and nurse educators playing a role in research supervision.
- To shift from the face- to- face research supervision model, which is failing in the era of advanced technology, to online research supervision (with preparation of both students and supervisors), and the cohort model to enhance integration of postgraduate students in a research culture of the school.

- To mobilise funding to support coursework masters nursing students working on their research project who are unable to find money for research purposes.
- To enhance collaboration between health services and higher education institutions in order to identify research problems to be investigated by postgraduate students.

Nursing practice

- To put into place strategies of supporting their employees undertaking their postgraduate nursing program in order to support the nursing profession's new vision of evidence based practice for the 21st century.
- To assist nursing graduates to pursue their research career in order to protect professionalism and to increase the image of nursing professionals.

Nursing research

The present study has laid the groundwork for further research in the area of postgraduate research supervision. Further researches might include the following:

- To investigate qualitatively the experiences of postgraduate nursing students on research and research supervision.
- To explore factors contributing to late completion and attrition among postgraduate nursing students.
- To explore perceptions of nurse educators who supervise postgraduate nursing students.
- To explore factors influencing completion among international students at postgraduate level.

5.5 Conclusion

The purpose of this study was to explore and describe perceptions of coursework masters nursing students on research supervision in a selected, university in KwaZulu-Natal. The findings of this study indicated that the respondents were predominantly female, national students and part-time students. This study highlights that the majority of the respondents spent more than the prescribed period of research supervision.

It is particularly interesting that expectations from postgraduate students to research supervision were at a high level for the majority of respondents. These results reflect the willingness of postgraduate students to take responsibility of their own learning as mature and self-directed learners. Furthermore, the respondents were highly satisfied with available resources such as the library and computer facilities. However, the majority of respondents disagreed that they did not have appropriate financial support for research activities, which could hinder progression toward completion in expected time.

The results underscore the facts that the majority acknowledged their supervisors as being adequately knowledgeable and skilled to support their research projects. However, many of the respondents only moderately agreed that their research supervisors understood their difficulties. The majority of respondents indicated high satisfaction of guidance on topics, and displayed moderate satisfaction on formulation of the purpose and objectives of their research. However, less than a half of the respondents strongly agreed that they had received good guidance from their research supervisors on research methodology, meaning that the majority of students perceived research supervisors as being less effective in research methodology. Overall, the majority of the respondents were moderately satisfied with the support from research supervisors, but findings revealed a vast range between the maximum perception scores and minimum scores of perceptions about research supervisors.

The findings also revealed that the longer the period of time respondents spent under research supervision, the more their perceptions of the ability of research supervisors decreased. Full time postgraduate students were more satisfied with their research supervisors than part-time students. This study underlines how the traditional model of face to face supervision is an advantage for full time students, but a disadvantage for part-time students. The findings of this study indicated that there is no relationship between perceptions of research supervisors and gender, age, and marital status, previous qualification and current specialization in nursing.

The findings of this study revealed that a half of the respondents only moderately agreed that they felt integrated into their school community and more than a half moderately agreed that the research ambiance in their school stimulated their work. Overall, the mean related to students' perceptions of the intellectual climate was at moderate level, which is lower than other aspects of research supervision.

Overall, the majority of participants perceived a high level of output of the research supervision process and strongly agreed that the journey had improved their ability to learn independently. Further, it is particularly interesting that a third of the participants strongly agreed and more than a half moderately agreed that they would consider undertaking research as a career. However, the majority of respondents moderately agreed they can supervise a simple research project, with a quarter who disagreed with the same statement. The findings also revealed that full time students perceived a higher level of output of the research journey than part-time students.

It would seem desirable then to move from the traditional model of research supervision to contemporary models such as online and cohort models of postgraduate research supervision to accommodate part-time students and to reinforce the intellectual climate within a school.

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APPENDICES

Appendix 1: Data collection instrument

Part 1: Socio-demographic and academic characteristics of the participants

Please answer each item. You can put **V** on the corresponding answer where it is applicable

1. **Please write in your age:** ——— Years old
2. **How long have you been working with your supervisor** (Period in months)
3. **Tick your gender:** Male ☐ Female ☐
4. **Please tick your relationship status:**
Single ☐ Married ☐ Divorced ☐ Separated ☐ Widow ☐
5. **Please tick the mode of attendance:**
Full time student ☐ Part time student ☐
6. **Please tick your status within the university:**
National student ☐ International student ☐
7. **What is your previous academic qualification?**
Bachelor's Degree ☐ Bachelors of Nursing Advanced Practice ☐
Honour's Degree ☐ Other (to be specified) ☐
8. **What is your current specialisation of study in coursework master's degree?**
Nursing Administration ☐ Community Health Nursing ☐ Critical care ☐
Nursing education ☐ Mental Health Nursing ☐ Midwifery ☐

Part Two: Perceptions about the role of the student during the research supervision process

On the scale, please tick how agree are you with the all statements: SD= strongly disagree, MD= moderately disagree, MA= moderately agree, SA= strongly agree

Nº	Items	SD	MD	MA	SA
9	I take the initiative in raising problems or difficulties with my research				
10	I maintain the progress of the work in accordance with stages agreed with the supervisor				
11	I submitted the proposal by the agreed deadline with the supervisor				
12	I inform the supervisor when I am absent for different reasons				
13	I familiarize myself with all procedures and regulations concerning postgraduate work				
14	I am responsible for the original contribution to the development of the proposal whilst under the guidance of the supervisor				
15	I take responsibility in familiarizing myself with the latest developments, trends and controversy in the chosen topic				
16	I am flexible on my own line of thinking and initiatives				
17	I develop informal contacts with peer postgraduate students on their own accord to discuss about my project				
18	I understand the difference between guidance from the supervisor rather than being told step by step what to do				
19	I attend all workshops planned for Research Methodology				

Part 3: Perceptions about research supervisor and research resources

Nº	Items	SD	MD	MA	SA
20	My supervisor/s have the skills and subject knowledge to adequately support my research project				

21	My supervisor/s gives me guidance about the nature of the research project and the standards expected at masters level				
22	My supervisor/s gives me guidance about the time frame so that dissertation may be submitted on time				
23	My supervisor/s makes a real effort to understand any difficulties I face				
24	I have been given good guidance in topic selection and refinement by my supervisor/s				
25	I have been given guidance in formulation and refinement of purpose and objectives of the study by my supervisor/s				
26	My supervisor guided me on the choice of the theoretical framework which is the most appropriate to the study				
27	My supervisor/s provide helpful feedback on my progress				
28	My supervisor/s gives me feedback in reasonable time				
29	I have received good guidance in my literature search from my supervisor/s				
30	I have received good guidance on the methodology of my project from my supervisor/s				
31	I have received good guidance from my supervisor/s during data collection				
32	I have received good guidance from my supervisor/s during data analysis				
33	I have received good guidance from my supervisor/s during report writing				
34	The relationship between supervisor and I has been purely professional				
35	My supervisor gave feedback that did not make me feel like she is attacking me as a person				
Perceptions regarding the institutional support					
36	My department provides opportunities for social contact with other research students				

37	My department provides opportunities for me to become involved in the broader research culture				
38	The research ambience in my school stimulates my work				
39	I feel integrated into my school's community				
40	My school provides a good seminar programme for research students				
41	I have adequate access to equipment necessary for my research				
42	I have a suitable working space				
43	There is appropriate financial support for research activities				
44	There is adequate provision of computing resources and facilities				
45	There is adequate provision of library facilities				
46	I have the technical support I need				

Part four: Perceptions regarding output from the research process

N ^o	Item	SD	MD	MA	SA
47	As a result of my experience so far I feel confident about managing a research project				
48	My experience so far has improved my analytical skills				
49	My experience so far has helped me to develop a range of communication skills				
55	As a result of my experience so far I have improved my ability to learn independently				
51	Through my experience I can supervise simple, uncomplicated research project				
52	During the research process I developed a number of transferable skills (e.g. academic writing, problem solving, networking, identifying relevant resources)				
53	I am encouraged to undertake a career in research as a result of the research experience.				

Appendix 2: Informed consent to participate in research

Study purpose: “To explore and describe perceptions of coursework master’s nursing students on research supervision in order to inform research supervision process in the discipline of nursing”.

You are chosen to participate in this research study as you have been informed before by Claudine MURARANEZA. At any time you have a question about this study you may contact the researcher student on declau15@hotmail.com or 209524338@stu.ukzn.ac.za.

The data will be collected for the purpose of this study only. The information you give will be treated confidentially by the researcher. Your participation is voluntary and you will not be penalized if you refuse to participate or decide to stop. Whenever you agree to participate in this study, you are asked to sign in a given space on this form, or send email to the given emails, to show your agreement to participate is voluntary. The time taken to complete questionnaire is approximately 20-30 minutes.

I understand what is expected of me in this study and I voluntarily agree to participate or withdraw if I wish.

This form is signed in double for those who get the hard copy. One copy is kept by the participant and another one by the researcher.

Signature of the participant

Date

Claudine Muraraneza

Email: declau15@hotmail.com or 209524338@stu.ukzn.ac.za

Cell phone: +27780498863

Supervisor: Prof NG Mtshali

University of KwaZulu Natal

Faculty of Health Sciences

Email:mtshalin3@ukzn.ac.za

Appendix 3: Information document

Study title: “Exploring perceptions of coursework masters nursing students on research supervision within a selected, University in KwaZulu Natal Province”.

Dear colleague,

I am Claudine Muraraneza, a Student at Howard College, School of Nursing and Public Health in University of KwaZulu-Natal. To accomplish my master’s degree in Nursing Education, I am requested to carry out a research project.

I am inviting you to participate in a research study. The purpose of this study is “**to explore and describe perceptions of coursework master’s nursing students on research supervision in order to inform research supervision process in the discipline of nursing**”. As you have been selected to be a part of my study sample, the questionnaire will help to get information required for this study. Your participation will be more important of this research. Your contribution is voluntary. The data receive from this study will be kept confidential. You will be free to withdraw from the study whenever is needed to without fear for consequences. This research poses no risk to the respondents as it involves giving responses to the posed questions. This study will inform the research supervision input and process and output from coursework masters nursing students’ perspective; information which should be used by research supervisors to improve their practice, and nursing education administration to plan strategies aimed to improve the quality of research supervision among nursing students, funding agencies to focus their effort towards formal training of nurse educators on research supervision. The results and recommendations from this study will also serve as baseline data for further studies related to research supervision.

Thank you

Student: Claudine Muraraneza

Email: declau15@hotmail.com

Cell phone: +27780498863

Research Supervisor: Professor NG Mtshali

Email:mtshalin3@ukzn.ac.za

Phone number: (031) 260 4946

Ethical committee: Phumelela Ximba Email: ximbap@ukzn.ac.za Phone (031) 260 3587

Appendix4: Ethical clearance from University of KwaZulu Natal



UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI

18 June 2012

Ms Claudine Muraraneza 209524338
School of Nursing and Public Health

Dear Ms Muraraneza

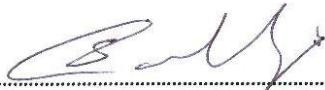
Protocol Reference Number: HSS/0363/012M
Project Title: "Exploring Perceptions of Coursework Masters Nursing Students on Research Supervision In A Selected, University in KwaZulu Natal"

In response to your application dated 7 June 2012, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully


.....
Professor Steven Collings (Chair)
/pk

cc Supervisor Professor NG Mtshali
cc Academic Leader Professor M Mars
cc School Admin. Ms Caroline Dhanraj

Professor S Collings (Chair)
Humanities & Social SC Research Ethics Committee
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 3587/8350 **Facsimile:** +27 (0)31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Inspiring Greatness



Appendix5: Letter requesting permission to the School of Nursing and Public Health

To: The Dean and Head of School of Nursing and Public Health

University of KwaZulu Natal

23 May 2012

From: Miss Claudine Muraraneza

Student number: 209524338

Email: claumfr@yahoo.fr

Cellphone: 0780498863

Dear Madam,

Re: Requesting permission to conduct a study

I would like to request a support letter for permission of conducting a study. I am a master's student in coursework program of Nursing Education/University of KwaZulu Natal. The title of the study is **“Exploring perceptions of coursework masters nursing students on research supervision within a selected, University in KwaZulu Natal”**. The permission letter is one of the documents requested by ethical committee.

The proposal of the study is attached.

Yours faithfully,

Miss Claudine Muraraneza

Email: claumfr@yahoo.fr

209524338@stu.ukzn.ac.za

Cell phone: +27780498863

Research Supervisor: Prof N.G. Mtshali

Email: mtshalin3@ukzn.ac.za

Faculty of Health Sciences

University of KwaZulu Natal

Appendix 6: Permission from the School of Nursing and Public Health



13th June 2012

Miss C Muraraneza
c/o School of Nursing & Public Health
Howard College Campus

Dear Miss Muraraneza

Support in conducting research in the Discipline of Nursing

With reference to your request, to the Dean/Head of School, regarding permission to conduct research on *“Exploring perceptions of coursework masters nursing students on research supervision within a selected, University of KwaZulu-Natal,”* kindly note that this request is hereby supported.

We wish you all the luck in the completion of your studies.

Thank you

Sincerely

Ass. Professor B P Ncama
Dean/HOS
School of Nursing
UKZN

School of Nursing and Public Health

Postal Address: University of KwaZulu-Natal, School of Nursing and Public Health, Howard Campus, Private Bag X 54001, Durban, 4000

Telephone: +27 (0) 31 2602499 Facsimile: +27 (0) 31 2601543 Website: www.ukzn.ac.za



Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix 7: Letter requesting the use of postgraduate students' expectations on research supervision

To: Prof. Sebi Lekalakala-Mokgele

The Director of School of Health care Sciences

University of Limpopo

12 June 201

From: Claudine Muraraneza

University of KwaZulu Natal

School of Nursing and Public Health

Dear Professor,

RE: Requesting permission to use the questionnaire of expectations of postgraduate students on research supervision

I hereby request permission to use, the questionnaire of expectations of postgraduate students on research supervision. The questionnaire has been used in a published article "Expectations of postgraduate nursing students: An inquiry". I am a coursework masters nursing student at the University of KwaZulu-Natal/The School of Nursing and Public Health in Nursing Education. One of the requirements for the degree is to conduct a research project. The title of the research project is "**Exploring perceptions of coursework masters nursing students on research supervision within a selected, University in KwaZulu-Natal**".

Your assistance is highly appreciated

Miss Claudine Muraraneza

Email: claumfr@yahoo.fr

209524338@stu.ukzn.ac.za

Cell phone: +27780498863

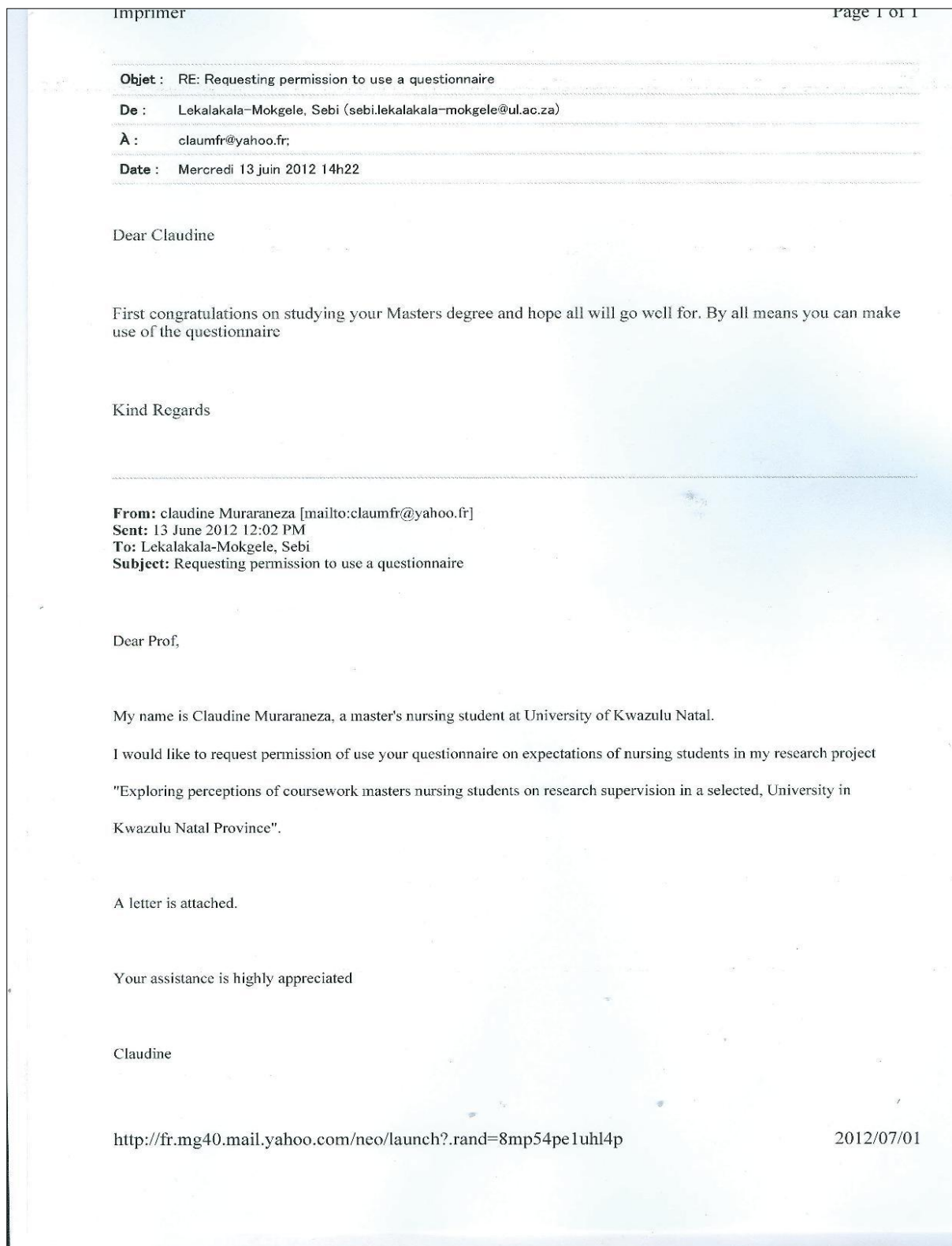
Supervisor: Professor N.G Mtshali

Email: Mtshalin3@ukzn.ac.za

University of KwaZulu Natal

Faculty of Health Sciences

Appendix 8: Permission to use questionnaire of expectations of masters students on research supervision



Appendix 9: Letter requesting permission on the use of PRES questionnaire

To: The Higher Education Academy

United Kingdom

13 June 2012

From: Miss Claudine Muraraneza

School of Nursing and Public Health

South Africa

Dear Staff member of Higher Education Academy,

RE: Requesting permission to use the PRES questionnaire for Postgraduate Research Experience Survey.

I hereby request permission to use the PRES questionnaire for postgraduate research experience survey. I am a coursework master's student in Nursing Education, at the University of KwaZulu-Natal/The School of Nursing and Public Health in South Africa. One of the requirements for the degree is to conduct a research project. The title of the research project is "Exploring perceptions of coursework masters nursing students on research supervision in a selected, University in KwaZulu-Natal". I would like to use the part of supervision, skills development, infrastructure, and intellectual climate. My participants are coursework masters nursing students who still working with their research supervisors.

Yours faithfully

Miss Claudine Muraraneza

Email: claumfr@yahoo.fr

209524338@stu.ukzn.ac.za

Cell phone: +27780498863

Research Supervisor: Prof NG Mtshali

Email: mtshalin3@ukzn.ac.za

Faculty of Health Sciences

University of KwaZulu Natal

Appendix10: Permission from Higher Education Academy to use PRES questionnaire

Objet : RE: Requesting permission to use PRES questionnaire

De : Paul Bennett (Paul.Bennett@heacademy.ac.uk)

A : claumfr@yahoo.fr;

Co : Surveys@heacademy.ac.uk;

Date : Lundi 25 juin 2012 18h08

Dear Claudine,

Thanks for your enquiry. This sounds like an interesting study. I'm happy to give permission for you to use the survey for the personal research purposes you've outlined in your e-mail and letter. Note, however, that permission only extends as far as your own Masters project – any wider use within the University or elsewhere would require us to license use of the survey. I'd be grateful if you could acknowledge the Higher Education Academy both on the survey instrument itself and in your final report. Do you have an up-to-date (2011) copy of the survey instrument? We'd be pleased to see your results once you've completed the study. Best of luck with your research.

Kind regards,
Paul

Dr. Paul Bennett
Academic Lead (Surveys and Consultancy)

M +44 (0)7720 968858

T +44 (0)1904 717500

Skype hea_paulbennett

The Higher Education Academy, Innovation Way, York Science Park, Heslington, York, YO10 5BR

www.heacademy.ac.uk – [Twitter@HEAcademy](https://twitter.com/HEAcademy)

From: Surveys

Sent: 19 June 2012 10:43

To: Paul Bennett

Subject: FW: Requesting permission to use PRES questionnaire

From: claudine Muraraneza [mailto:claumfr@yahoo.fr]

Sent: 18 June 2012 18:54

To: Surveys

Subject: Requesting permission to use PRES questionnaire

Dear staff members of Higher Education Academy,

My name is Claudine Muraraneza, a master's nursing student in Nursing Education, University of Kwazulu Natal in South Africa.

I would like to request permission of use your questionnaire "Postgraduate Research Experience Survey" in my research project

"Exploring perceptions of coursework masters nursing students on research supervision in a selected, University in Kwazulu Natal Province".

A letter with more explanations is attached

Your assistance is highly appreciated
Claudine

<http://fr.mg40.mail.yahoo.com/neo/launch?.rand=8mp54pe1uhl4p>

2012/07/01

Appendix 11: To whom it may concern from editor

Editing Declaration

P O Box 531
Hillcrest
3650
KwaZulu-Natal

2012-12-03

TO WHOM IT MAY CONCERN

Thesis Title: EXPLORING THE PERCEPTIONS OF COURSEWORK MASTERS
STUDENTS ON RESEARCH SUPERVISION AT A SELECTED UNIVERSITY IN
KWAZULU-NATAL

Author: Claudine Muraraneza

This is to certify that I have edited the above thesis from an English language perspective only, and have made recommendations to the author regarding spelling, grammar, punctuation, structure and general presentation.

A marked-up version of the thesis has been sent to the author and is available as proof of editing.

I have had no input with regard to the technical content of the document and have no control over the final version of the thesis as it is the prerogative of the student to either accept or reject any recommendations I have made.

Therefore, I accept no responsibility for the final assessment of the document

Yours faithfully

A handwritten signature in black ink, appearing to read 'M Addis', with a long horizontal stroke extending from the bottom right.

Margaret Addis