

**ATTITUDES AND EXPERIENCES OF NURSES IN THE IMPLEMENTATION OF  
24-HOURS ON CALL STRATEGY IN GREATER TZANEEN SUB-DISTRICT  
CLINICS, MOPANI DISTRICT, LIMPOPO PROVINCE**

**BY**

**THEMBELIHLE BRIGITTE NYATHI**

**MINI-DISSERTATION**

**Submitted in (partial) fulfilment of the requirements for the degree of**

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**SUPERVISOR: PROFESSOR LINDA SKAAL**

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## **DEDICATION**

In memory of my late brother and father Dr B.B.R. Nyathi and Dr S.P.M Nyathi who continuously motivated me and taught me the importance of studying and upgrading oneself.

## DECLARATION

I declare that the mini dissertation hereby submitted to the University of Limpopo, for the degree of Master in Public Health on **Attitudes and Experiences of nurses in the implementation of 24-hours on call strategy in Greater Tzaneen Sub-District clinics, Mopani District, Limpopo Province** has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been dully acknowledged.

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Nyathi T.B. Ms.

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Date

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The Limpopo Province: Department of Health for giving me permission to conduct the study.

## **ABSTRACT**

The purpose of this study was to determine the attitudes and experiences of nurses when implementing the 24-hour on call strategy in clinics. A quantitative descriptive research was conducted. A stratified random sampling approach was used to divide the nurse's population into homogeneous strata from which elements were selected randomly. Three groups of respondents participated in the study, namely, professional nurses (n=99), enrolled nurses (n=32) and enrolled nursing assistants (n=35). The study highlighted the areas that the respondents felt needed to be strengthened in order to provide quality care when implementing the strategy. The findings revealed that there were some personal and management factors that needed to be addressed and improved in order to ensure continuity of services to the communities in rural areas. The study also identified positive areas which the respondents felt supported the implementation of the strategy.

### **KEY CONCEPTS**

24-hour on call strategy, Integrated Primary Health care approach, experience, attitudes.

## **Definition of concepts**

### 24-hour on call system strategy

The 24-hour on call system strategy is implemented by allocating nurses to work during the day for a full day's work and allowing the same staff to be on standby at night. The back bone of this strategy is the Professional Nurse with midwifery who either works with an Enrolled nurse or an Enrolled Nursing Assistant. The staff is allocated to work on a rotational basis (Limpopo Province Annual Performance Plan, 2012).

## Abbreviations

CHPS	Community- Based Health Planning and Services
MREC	Medunsa Research Ethics Committee
PHC	Primary Health Care
SPSS	Statistical Package for the Social Science
WHO	World Health Organization

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## **CHAPTER 1**

### **INTRODUCTION AND BACKGROUND**

#### **1.1 INTRODUCTION**

The chapter provides the purpose and overview on the study and where it was conducted. It is outlined into the background of the study, problem statement, significance, justification and aim of the study, the research questions and objectives of the study.

#### **1.2 BACKGROUND**

The World Health Organization (WHO) reports that nearly 1000 million of the world population were trapped in a vicious circle of poverty, malnutrition, disease and despair. In most parts of developing countries these challenges were found in rural or urban slums. The challenges were worsened by health systems that were poorly organized leading to two thirds of the rural population not having reasonable access to any permanent form of health care (WHO, 1981).

In 1977 the thirtieth World Health Assembly adopted a resolution that wanted governments to target 'health for all by the year 2000', by making Primary Health Care (PHC) accessible at all levels of care within a comprehensive health system. This led to the International Conference on PHC in 1978 which was held in Alma-Ata Russia where PHC was declared key to health for all. The declaration urged governments to formulate policies, strategies and plans to launch and sustain PHC in collaboration with other sectors (WHO, 1979).

The South African government of National Unity as a member state of the WHO formulated comprehensive policies, strategies and plans in 1994 that were based on the Reconstruction and Development Programme of the African National Congress (ANC 1994), the District Health System and the Primary Health Care Approach as pronounced at Alma Ata in 1978. The policies, strategies and plans were distributed to provinces. Provinces adapted them based on the District Health System using the PHC approach as a vehicle for delivering health care for their communities (Department of Health, 1996).

The Limpopo Province Department of Health adopted the District Health System using the PHC approach in order to make services available and accessible for 24-hours in rural and urban communities. It introduced and implemented the strategy of providing 24-hour services in PHC facilities. This 24-hour strategy was implemented using either the night duty or the 24-hour on call strategy. The 24-hour on call strategy was implemented by allocating one professional nurse and an enrolled nurse or enrolled nursing assistant to work the normal working hours during the day and be on standby after hours to provide health care when there is a need.

The 24-hour on call strategy expected nurses to be available to render curative, maternal health and emergency services after normal working hours when patients come. (Limpopo Province Department of health Annual Performance Plan, 2012/13-2014/14).

The implementation of this strategy within Greater Tzaneen sub- district was done on a continuous basis in 22/33 clinics in the past year 2013. The research was conducted in order to identifying the attitudes and experiences of nurses.

### **1.3. RESEARCH PROBLEM**

The implementation of 24-hour on call services strategy in clinics within Greater Tzaneen sub- district has had its own share of challenges. An observation was made that in some of the facilities it were not implemented at all, while five were doing it intermittently and twenty two operated on a continuous basis. The unavailability of services after normal working hours, made the services inaccessible to the poor who could not afford private transport to the nearest hospitals. This led to delay in patient care. This is supported by a study that was conducted by the WHO which noted that most services in developing countries were in the urban areas compared to rural areas. Lack of services in the rural area has led to an increase of the infant mortality rate ranging from 100 to 200 per 1000 infants compared to 10 to 20 per 1000 infants and the death rate for the under-five averages 20 per 1000 compared to 1 per 1000 in developed countries (WHO, 1984). These also affected the turnaround time of the limited number of ambulances as they were expected to respond to calls from within villages that did not have street names. Patients that were supposed to be delivered in clinics were transferred to the Maternity Sections of District hospitals and this led to overcrowding.

### **1.4. SIGNIFICANCE OF THE STUDY**

A study on the views of nurses on the 24-hour on call strategy was important for several reasons. The study identified the strengths, needs and challenges in implementing the 24-hour on call strategy. The study will augment the knowledge and understanding of implementing the 24-hour on call system strategy, and contribute to the development of policy based on the recommendations.

## **1.5. AIM OF THE STUDY**

To determine the attitudes and experiences of nurses when implementing the 24-hr on call strategy in Greater Tzaneen Sub- District clinics.

## **1.6. RESEARCH QUESTIONS**

1.6.1 What are the attitudes of nurses regarding the 24-hour on call strategy in Greater Tzaneen Sub- District Clinics?

1.6.2 What are the experiences of nurses in implementing the 24-hour on call strategy in Greater Tzaneen Sub- District Clinics?

## **1.7. OBJECTIVES OF THE STUDY**

1.7.1 To determine the socio-demographic profile of nurses providing 24-hr on call strategy in Greater Tzaneen Sub District Clinics.

1.7.2 To determine the experiences of nurses on the implementation of 24-hour on call strategy in Greater Tzaneen Sub District Clinics.

1.7.3 To determine the attitudes of nurses in the implementation of the 24-hour on call strategy in Greater Tzaneen Sub District Clinics.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1. INTRODUCTION**

The literature review discusses the overview of different strategies that have been implemented by countries after signing of the Declaration of Alma Ata in 1978 to address access to basic health services. It also identified the benefits and challenges that health care workers experienced when making services available in rural areas. The purpose of this review was to compare the research findings and reports with the literature regarding the different 24- hour strategies implemented using the PHC Approach by different countries.

#### **2.2. Overview of international strategies in implementing PHC Approach**

According to the World Health Organization, health problems are interlinked intimately with socio-economic problems. There are also disparities in the distribution of health care services especially in developing countries with most health care facilities based in urban areas than in rural areas. The inequity in the distribution of health care services has led to the highest infant mortality rate in developing countries which ranged from 100 to 200 per 1000 infants compared to 10 to 20 per 1000 infants in developed countries. The Declaration of Alma Ata expected member states to come up with policies, strategies and plans to make services accessible for 24-hour to both rural and urban communities. The plans are based on the availability of health care professionals, resources and structures (WHO, 1984).

These led to the World Health Organization coming up with a global policy with recommendation on how to improve retention of trained health workers in rural areas. The policy was developed in response to a request from global leaders, civil

societies and member states. The shortage of staff in remote rural areas hinders access to health care services and this leads to slow progress towards achieving health for all and improving health outcomes. This is based on the fact that there is generally a shortage of health workers and most are based in cities not in rural remote areas, in spite of the fact that the proportion of population living in rural areas is greater. The policy has a set of comprehensive strategies that can help countries encourage health workers to live and work in remote and rural areas. The WHO has identified four main categories of interventions and these are: Education which look at policies that enrol students from the rural areas, locating health professional schools in the rural areas, exposing undergraduate students to rural community experiences, revision of curriculum to include rural topics and designing continuing educational and professional programs that meet the needs of rural health workers. Regulation recommendations which include introducing regulatory and enhanced scope of practice for rural areas to increase job satisfaction. Financial incentives recommendations which can be sustainable financial incentives like hardship allowance, free transport, grants for houses and lastly personal and professional support recommendations which are improving living conditions, investing in infrastructure and services, provision of a safe working environment, appropriate equipment and supplies, supportive supervision and mentoring to entice potential employees (WHO, 2010).

However in the rural communities in the United States, the provision of health care was done by a variety of professionals. In spite of the availability of different health professionals to provide services in rural communities, in New Mexico and Alaska states community members were experiencing many challenges with the provision of effective and ethical care in the rural areas. The challenges they had were travelling

long distances to access specialized health care and limited resources. The health professionals also had challenges like limited resources, fewer continuing education opportunities, insufficient supervision, training, isolation, difficulty in building a trusting relationship with the community, not being prepared to work in rural settings and dual responsibilities. A qualitative focus group discussion was conducted to enhance the knowledge and understanding of preparing various professionals prior to working in rural health setting. This led to the following recommendations: development of professionals that want to work in rural settings in order to retain them, professionals must participate in informal community activities and community engagements, professionals must establish networks with other providers facing similar issues and consultants, professionals must set boundaries in order to decrease the workload and apply self-care strategies to prevent burnout due to rural isolation and limited resources. Health care providers need to adjust service delivery to meet the need of communities by expanding their provider roles (Chipp, Dewane, Bems, Johnson, Warner and Roberts, 2011).

It has been noted that health workers working in public health centres in rural communities in Konya, Turkey experienced low job satisfaction levels. This is supported by a survey that was conducted and the findings were as follows: the percentage of job satisfaction was 60% across the health workers with midwives having the lowest score. The low satisfaction rate in each category was influenced by different issues namely; for maintenance staff it was low salary which was lower than that of hospital staff, general practitioners had poor opportunities for an academic or management career, while midwives had a variety of work and difficult job, and nurses were not happy with the way their bosses handled them. In general

all the health workers were not satisfied with their salaries and conditions of work (Bodur, 2002).

However Vietnam has 80% of their population living in rural areas, and this has led to 84% of public health staff to be allocated in rural areas. In order to ensure that the staff provides quality care services, an explorative qualitative study in two provinces in North Viet Nam was conducted. The aim of the study was to determine motivating factors and perception of health workers in rural areas and develop strategies. Findings were that health professionals were motivated by financial incentives, appreciation by managers, colleagues and communities, a stable job and income as well as training. The areas of concern were low salaries and difficult working conditions. The recommendations were implementation of performance management systems and supportive supervision (Dieleman & Hammerijer, 2003).

Though most developed countries have doctors, it is not always easy to allocate them to rural areas to provide 24- hour Primary Health Care services as it was in Australia. Doctors in Australia were not willing to be allocated to deep rural areas due to cost and non-availability of basics like Information Technology, thus the government used professional nurses to provide clinical services in a diversity of roles. The professional nurses are supported by other health professionals on a part time basis. The challenges experienced with this strategy were among others, no succession plan or development for the allocated nurses. Nurses did not have off - time and were expected to be on duty day and night at all times. A recommendation was made to the department of health to place the nurses under the leadership of a general practitioner for support, improve working conditions and develop the nurses with assistance of universities (National Rural Health Alliance, 2005).

Contrary to Australia in Venezuela doctors are willing to be placed in communities to provide comprehensive publicly funded health care, dental care and sports training. This made services available from the cradle to the grave for the marginalised communities at all times for twenty four hours. It was also noted that this led to the reduction of infant mortality rate from 23 per 1000 infants in 2003 to 19 per 1000 infants in 2005. This programme was praised by the WHO because of its impact. The programme had its own share of challenges, for example, in 2006 opposition officials did not support it and evicted doctors from their practices and used the space as offices (<http://en.wikipedia.org/wiki/Missio-Barrio-Adentro> accessed 12 January 2013).

The same strategy of placing doctors with the support of a nurse within a specific neighbourhood where they stayed was adopted by Cuba in Havana Cerro Municipality. The team was responsible for 150 to 200 families, expected to provide free 24-hour comprehensive services and conduct home visits. The challenges observed were that health needs were not the same for each community. The health authorities are now moving towards specific health services for specific communities, in order to provide resources based on needs but not the Millennium Development Goals which have been achieved (Reed, 2005).

However, in Guatamela, shortage of staff led to allocation of midlevel health workers or Enrolled Nursing Assistants to strengthen health systems and redress inequality in rural settings. The Enrolled Nursing Assistants formed the largest cadre of health care workers and were providing essential services to vulnerable communities thus

addressing priority health needs. A study using semi structured interviews was conducted to find out how they continued to be motivated and satisfied in spite of challenges. The challenges that they experienced were low status and inadequate recognition, lack of professional organization and national information systems registration which made it difficult to differentiate them from other professionals thus difficult to monitor their deployment and productivity. These factors led to them not being integrated into the health system and not receiving attention in their training, support, career development and progression. They often work in remote areas and face constraints like staff shortages, lack of medicines and equipment's finding were that the nurses were from the communities in which they worked and had built a rapport which was central to motivating them. Satisfaction was derived from the appreciation from the community and a sense of treasuring their work. They confronted their challenges by coming up with initiatives. Recommendations were made that there should be strategies that focus on training, support, problem solving and building relationship with communities served (Hernandez, Hurtig, Dahlblom & Sebastian, 2012).

Due to shortage of professional nurses in Bangladesh Dr Zafrullah Chowdhury introduced a project known as Gonoshasthya which meant 'health for the people' in rural communities to break the cycle of poverty. In the project the backbone of the centre are women who are trained as paramedics for six months to take and test blood, take urine samples, insert intravenous lines and perform diagnostics for some diseases, this has led to the emancipation and involvement of young women in health care. This project serves 1.2 million people with 60% of them poor. The aim of the centre is to integrate health care with other social needs like nutrition, clean

water, good sanitation, family planning and employment. The governance of the centre involves patients, medical staff and the local government officials. The health insurance scheme allows families to pay according to their ability while ensuring that they receive essential health care services. A holistic approach to health care forms the basis of intervention in the centre, which has several supporting projects like vocational training centres, agricultural cooperatives, generic drug manufacturing plant. The benefits of the services are provision of basic treatments, family planning or vaccinations within communities and reduction of scabies and ear infections through treatment with herbs and basic hygiene. The challenges faced are the occasional opposition by some pharmacies and private hospitals. Doctors who are working in government are also sceptical about PHC regarding it as a thankless task, this creates an obstacle to the provision of universal health care to the poor (Bulletin of WHO, 2008).

However a qualitative study was conducted in rural India to identify factors that were deterrents for nurses to work in rural areas in spite of a high salary. The following factors were identified: lack of infrastructure, support for staff, security and drugs. They also felt that there was political interference. Some of the areas that were referred to as of concern were issues such as lack of water, electricity, educational facilities for their children and no connectivity. The recommendation was that the government should come up with an approach that is a package that will address both salary and non-salary incentives in order to increase rural recruitment and retention (Rao, Ramani, Murthy, Hazarika, Khandpur, Khanna, Vujicic, Berman & Ryan, 2010).

### **2.3. Overview of African strategies in implementing PHC Approach**

This was in contrast to developing countries like the National Government of Ghana in the Volta Region which allocated nurses due to the scarcity of doctors. The government piloted a strategy known as Community Based Health Planning and Services (CHPS). A nurse was based within the community under the leadership of the health committee and traditional leaders. The nurse provided free comprehensive health care. The benefits of this strategy were both economical and health - related; communities saved money as they accessed services in the community at any time rather than having to travel long distances to visit fixed health facilities. Preventative services like family planning were easily available thus reducing the birth rate. The main challenge with this strategy was the lack of a relief nurse when the nurse is off or on leave (Nyonator, Abgadza, Gbeddy, Nyarku, Jones, Miller & Phillip, 2002).

The same strategy of putting professional nurses in PHC facilities was implemented in Limpopo Greater Letaba sub-district. This is according to the qualitative explorative descriptive study which was conducted by Mohale and Mulaudzi, (2008) on the experiences of professional nurses working in a rural PHC setting. The findings were that professional nurses were experiencing emotional and physical strain due to staff shortage, poor conditions of services and high staff turnover. They also noted that there were infrastructure challenges like limited accommodation, no communication system in place shortage of water and inability by the supervisors to respond to their needs in time. A recommendation was made that the department must develop policies and strategies on retaining staff and addressing the needs of nurses.

However a cross sectional survey conducted by Pillay (2009) to evaluate the levels of satisfaction between different groups of nurses in public and private sector showed the following findings: both private and public nurses were satisfied with the relationship they had with colleagues and a sense of belonging in the communities they were working. It was noted that private sector nurses were generally satisfied when compared with public sector nurses. Public sector nurses were not satisfied with their pay, workload and availability of resources while private sector nurses were not satisfied with the career development opportunities. Nurses working in rural areas were generally not satisfied with their pay, working conditions and safety of their work environment. Recommendations made were that health managers must improve the working conditions in order to secure high staff retention.

While a study article on identifying work related stress, burnout, job satisfaction and general health of nurses reported that stress related to staff issues included poor staff management, shortage of resources and security risks. These were important in determining burnout and job satisfaction among professional nurses, which affected their mental health and wellbeing, compromised productivity, performance and quality of patient care. The study recommended that strategies and intervention programme towards improving nurses and patient related outcomes be developed (Khamisa, Olden, Peltzer, and Ilic, 2015).

#### **4. CONCLUSION**

The literature reviews indicated that The Alma Ata Declaration was implemented differently by member states or individual organizations to address health issues and

socio-economic determinants. The strategies that were adopted by the different member states were based on availability of health care providers, willingness of doctors to work in rural areas and the level of poverty in the rural communities. It also identify the challenges that rural health workers experienced or are exposed to when working in rural communities. In states where communities can afford to pay for services they were charged a nominal fee, while those that were poor got free services. It was also noted that the unavailability of health care providers remained a major concern in both developed and developing countries and did contribute to challenges in the implementation of the different strategies.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter discusses the research design, population and sampling method of nurses in facilities providing 24-hour on call strategy, method used in data collection, data analysis, measures that were taken to ensure validity and reliability ethical consideration and limitations of the study.

#### **3.2 STUDY DESIGN**

In this study a quantitative study approach was utilized, in order to provide more insight into the attitudes and experiences of nurses in the implementation of the 24hours on call strategy.

A cross sectional descriptive study design was implemented and data collected using a questionnaire. The study examined data collected at one point in time from the different categories of nurses about their attitudes and experiences with regard to the implementation of the 24-hour strategy in Greater Tzaneen Sub District. The data collected from each category of nurses was compared using statistical measures (Brink H, I, Van Der Walt C & Vanrensburg G. 2006).

#### **3.3 STUDY SITE**

The study was conducted in Greater Tzaneen Sub-District in five local areas. Greater Tzaneen Sub-District is situated on the eastern quadrant of the Limpopo Province within Mopani District Municipality. It extends from Haenesburg in the west,

to Rubbervale in the East, Modjadjikloof to the North and Tricharstdaal in the south. It comprise of 5 towns, 34 wards 125 rural villages with 80% of households residing in the rural areas (Greater Tzaneen Municipality Integrated Development Plan, 2012– 2013). The total population of the sub-district is 402 146 (District Health Information System, 2014).

### **3.4 STUDY POPULATION**

The study population were nurses working in clinics that were implementing the 24-hour on call strategy in 2013 within Greater Tzaneen Sub-District at the time of the study. The study population included the following educational categories; Professional nurses, Enrolled nurses and Enrolled nursing assistants. The approximate number of the target group was 250 according to the Human Resource Department in the district and the staff establishment (HRD 2013). The number further divided into the different sub- groups was: Professional nurses 142, Enrolled nurses 51 and the Enrolled nursing assistants 57.

A study population consists of a group of individuals with specific characteristics that are of interest to the researcher to answer specific questions (Arkava and Lane, 1983 as cited in De Vos 2002). The study population assisted in setting the boundaries of the study unit.

### **3.5 STUDY SAMPLING**

The study population consisted of all nurses working in clinics that provided 24-hour on call strategy in 2013 in Greater Tzaneen Sub-District. A complete list of all the nurses was drawn from the Human Resource Department in the district and the staff establishment of each clinic (Joubert et al., 2007).

The population parameters were the educational level of the nurses which were categorised as follows: Professional nurses, Enrolled nurses and Enrolled nursing assistants, this ensured that each sub-group was adequately represented in the sample.

A stratified random sampling approach was used to divide the population into homogeneous strata from which elements were selected randomly (Polit et al., 2012). The study population was sub-divided according to their different educational levels namely Professional nurses, Enrolled nurses and Enrolled nursing Assistants to make sure that the population under study was proportionate. Within each stratum random sampling was performed based on the sample size of each sub-group. This ensured that each sub-groups sample size was represented proportionately. The sample size for Professional nurses was 117, Enrolled nurses 49 and Enrolled nursing Assistants 56 bringing the total population to 222.

The sample size calculation was based on the Sample size Table from the research Advisors (2006). The table is based on a confidence level of 95% with a margin of error of 5%. The population for each sub group will have a 10% add on in order to cover for the respondents that are not going to participate in the research or withdraw from the study. ([http://research.advisor.com/group/survey-research/.../quantitative research sample](http://research.advisor.com/group/survey-research/.../quantitative-research-sample) accessed 08/July/2014).

### **3.5.1 INCLUSION CRITERIA**

The nurses that were included in the study are those that were working in clinics that provided 24-hour on call strategy in 2013.

### **3.5.2. EXCLUSION CRITERIA**

The nurses that were excluded from the study are those that were working in clinics that were not implementing the 24-hour on call strategy, were providing day care services, and night duty 24-hour services in 2013.

## **3.6 DATA COLLECTION METHODS**

### **3.6.1 Data collection tool**

Data was collected using an adapted structured self-administered questionnaire with closed and open- ended questions that addressed the objectives. The questionnaire was written in English as all participants were conversant with the language. The questionnaire was sub divided into four parts, namely, socio-demography, attitudes and experiences and recommendations. Part one included questions on the socio-demographic information, part two comprised of attitudes and experience questionnaires while part three consisted of open ended questions with recommendations.

The questionnaire was partially adopted from the research questionnaire on strategic planning in European retail banks and the two studies conducted by St Francis Xavier and St Martha on job satisfaction, attitudes and trends in nursing.

### **3.6.2. Recruitment**

Study participants were recruited personally from their respective clinics, in order to speed up the process. Those who agreed to participate were issued with the questionnaire to complete.

### **3.6.3. Data collection procedure**

Data was collected in the months of February to March 2015 using the self-administered questionnaire adopted from existing questionnaire studies to suit the purpose of the study. One research assistant was trained on the data collection tool within a day. A total of 200 questionnaire were distributed to each individual nurse by the researcher and an assistant in the clinics and during meetings. The researcher and assistant explained the aim of the research study, questionnaire and the ethical considerations to the participants.

The questions were numbered for each category prior to distribution; for professional nurses it was from number A1 to A122, while for Enrolled nurses it was from number B1 to B45 and Enrolled nurses it was C1 to C56. The respondents were given an opportunity to complete the questionnaire which took 15 minutes. The respondents completed the questionnaires and these were collected by the researcher and research assistant. The questionnaires were checked whether they were completed correctly or not.

The questionnaire used the following measurement scales, nominal for the mutually exclusive categories for example marital status, and interval scales which were assigned real numbers according to categories for the age distribution.

### **3.6.4. Pre testing**

The questionnaire was pre-tested in order to increase its content and validity with the assistance of the University Statistician. The questions were redesigned and corrected based on the inputs from the Statistician. Most of the questions were from previously validated studies with a few added to address all the objectives. The

questionnaire was partially adopted from the research questionnaire on strategic planning in European retail banks and the two studies conducted by St Francis Xavier and St Martha on job satisfaction and attitudes and trends in nursing.

### **3.6.5. Piloting the instrument**

A pilot study was conducted in two clinics that were rendering the 24-hour on call strategy in Greater Letaba Sub-District. Piloting was done in order to identify problems with the questions and to allow for clarity, relevance, completeness and consistency. Changes to the questions were made based on the recommendations.

### **3.6.6. Bias**

Sampling framework bias was minimized by dividing the study population into their professional categories, and performing random selection from each category to give each nurse an opportunity to be selected.

Information bias was minimized by allowing the study population to add options that are not in the questionnaire, which were grouped into themes and analysed quantitatively.

## **3.7 VALIDITY AND RELIABILITY**

### **3.7.1 Testing Validity**

The validity of the draft questionnaire was piloted to check on the relevance of each item on a separate sample population which consisted of nurses from the different categories prior to starting with the research project. Each objective had its own set

of questions in order to ensure that all the aspects of the study are covered and the aim of the research was addressed.

### **3.7.2 Testing reliability**

The pilot study also checked if it was feasible to conduct the study, and identified possible flaws in the data collection instrument. Identification of these flaws at an early stage assisted in avoiding high cost at a later stage and allowed the questionnaire to be revised. Reliability of the questions was checked beforehand to assess consistency and stability (Brink et al., 2006).

## **3.8. DATA ANALYSIS AND INTERPRETATION**

The first phase of data analysis and interpretation involved various clerical and administration tasks which were reviewing data for completeness and legibility, retrieving missing pieces of information and assigning identification numbers to each questionnaire (Brink et al., 2012).

The second phase was identifying the statistical method that was used to reduce, summarise, organise, manipulate, evaluate interpret and communicate the findings (Brink et al., 2006). The process of data analysis was done using the Statistical Package for the Social Science computer programme (SPSS) to calculate all statistics. Descriptive statistics was used for calculation of frequency distribution, means, and standard deviation. The data was further organised according to the level of measure that is nominal and interval scales. All associations were determined using Chi square test, where level of significance will be determined. Graphs were used to present data for ease of interpretation. The attitude questions

which were coded using a 3point Likert scale that is agree, disagree and neutral responses were sought. Responses were categorized into positive and negative attitudes.

Open ended questions were reviewed in order to understand the content and grouped into themes which were analysed quantitatively. Themes were developed for each variable irrespective of whether there was an answer to the said question.

### **3.9. ETHICAL CONSIDERATIONS**

The researcher submitted the proposal to the Senior Degrees Committee at the University of Limpopo for approval, after approval it was submitted to the Medunsa Research Ethics Committee (MREC) for ethical clearance. The clearance certificate was submitted to the Department of Health Limpopo Province in order to obtain permission to conduct the study.

Nurses were recruited to participate in the study. Nurses participating in the research were made aware of their right to decide if they wanted to participate freely without being coerced. Information on the nature and purpose of the research was given; the participants were also informed about their right to discontinue participating in the study. The participant's privacy was protected by obtaining voluntarily informed consent from them before participation, and not capturing participant's names in the final document. The questionnaires were coded in order to ensure confidentiality.

### **3.10 CONCLUSION**

This chapter discussed the quantitative method used to collect data, and the use of SPSS to analyse data. The following chapter will discuss the results of the study

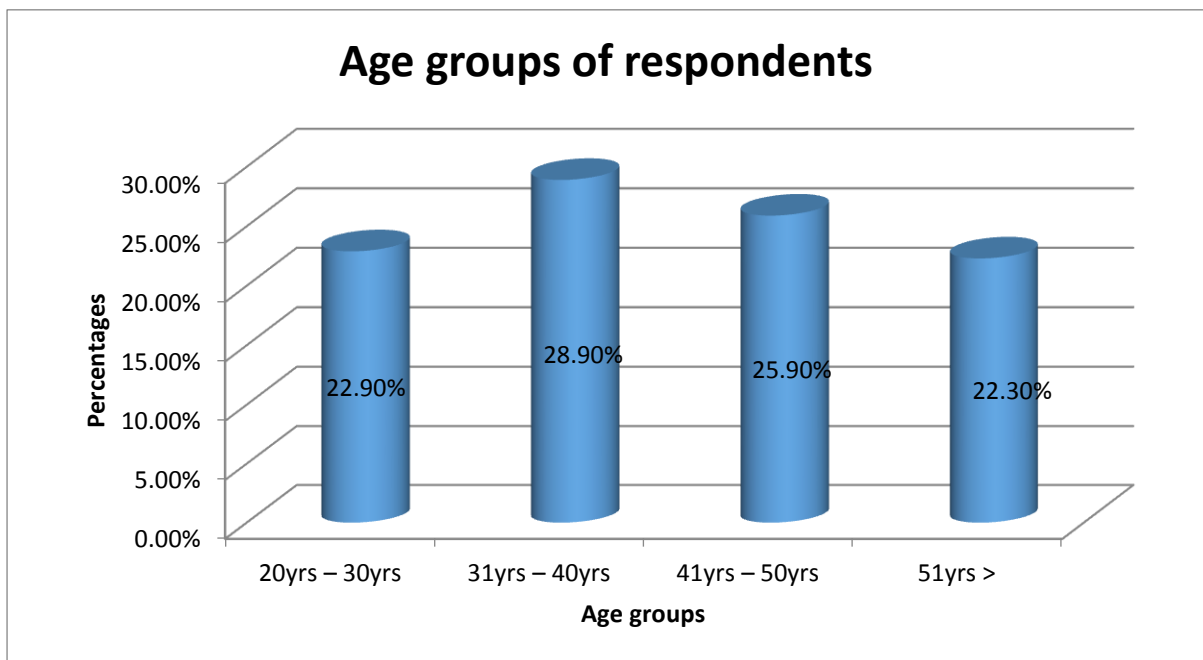
## CHAPTER 4

### RESULTS

#### 4.1 INTRODUCTION

This chapter presents and describe the findings of the data collected during the study. The results are presented using both tables and graphs. The chapter is made out of the following sections as illustrated in the research instrument: Socio demographic characteristics of participants, attitude questions that are divided into Job Satisfaction, workload, Health Aspect, Resources, situational factors, support services, knowledge and skills and staffing.

#### 4.2 Socio - demographic characteristics of participants



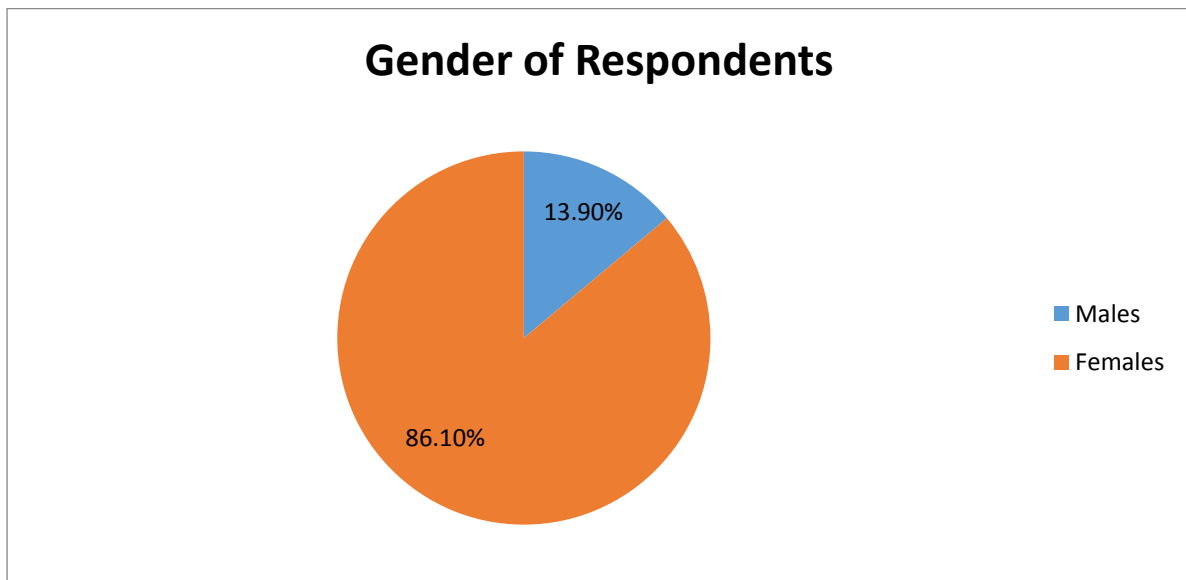
**Fig 4.1: Age distribution of respondents**

Fig 4.1 shows that most respondents were between 31- 40yrs, followed by those between 41 – 50yrs and least were those less than 30yrs.

**Table 4.1: Socio - demographic profile of the participants (% in columns)**

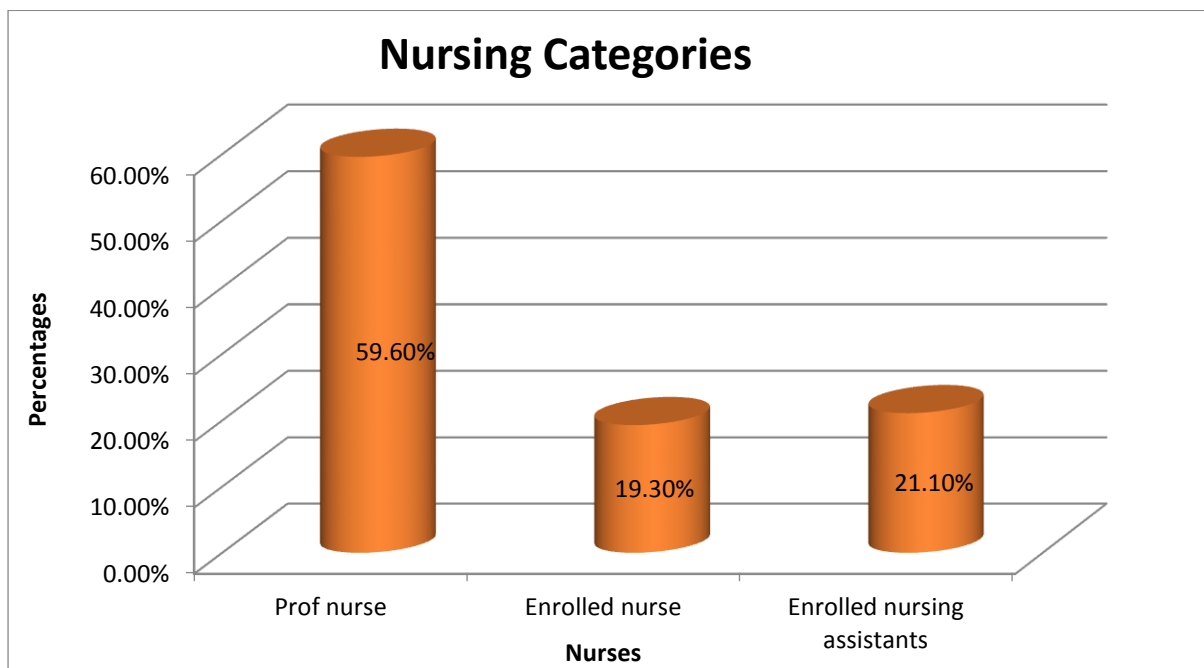
Variables		Frequency	Percentage
Marital status	Single	78	47.0
	Married	73	44.0
	Divorced	5	3.0
	Widowed	10	6.0
Educational level	Less than matric	9	5.4
	Matric	51	30.7
	College/univ	106	63.9

Table 4.1 shows that the majority of the participants (63.9%) have trained at a college/ university. Also, 44% of respondents are married and 56% are unmarried.



**Fig 4.2: Gender distribution of respondents**

Figure 4.2 shows that 86.1% of respondents are females and only 13.9% are males.



**Figure 4.3: Nursing category distribution**

Fig 4.3 shows that most of respondents are professional nurses (59.6%), followed by enrolled nurses (21.1%) and 19.3 were enrolled nurses.

**Table 4.2 Socio - demographic profile of participants (% in columns)**

Aspects		Frequencies	%
Years of experience	2yrs – 5yrs	42	25.3
	6yrs – 10yrs	42	25.3
	11yrs – 15yrs	24	14.5
	➤ 15yrs	58	34.9
Extra number of hours worked in a week	1-2hrs	9	5.4
	3-4hrs	8	4.8
	5-6hrs	18	10.8
	➤ 6hrs	131	78.9

Table 4.2 shows that the majority of the participants (78.9%) work for more than 6hrs extra when on call each week. The years of experience of respondents ranged from 11yrs-15yrs (14.5%), for the 2yrs – 5yrs (25.3%) and >15yrs (34.9%).

### Response to experience and attitude of respondents

**Table 4.3: Self-reported attitude with regard to personal factors (% in column)**

Personal factors		Frequency N=166	Percentage
Occupation	Prof nurse		59.60
	Enrolled nurse		19.30
	Enrolled nurse Ass		21.10
Gender	Male		13.9
	Female		86.1
Satisfaction	Not satisfied	120	72.3
	Satisfied	46	27.7
Workload	High workload	141	84.9
	Acceptable workload	25	15.1
Health	Does not affect health	40	24.1
	Affect health	126	75.9
Support	Not adequate	114	68.7
	Adequate	52	31.3

Table 4.3 shows that under personal factors the majority (72.3%) were not satisfied, reported that they experienced high workload (84.9%). 75.9% reported that the call

shift affected their health. Also that there was no adequate support from management (68.7%).

**Table 4.4: Self-reported attitude with regard to management factors. (% in column)**

Management factors		Frequencies N=166	Percentages
Resources	No resources	110	66.3
	Adequate resource	56	33.7
Situation	Not safe	113	68.1
	Safe	53	31.9
Skills	Inadequate	46	27.7
	Adequate	120	72.3
Staffing	Not adequate	132	79.5
	Adequate	34	20.5

Table 4.4 shows that under management factors the majority of respondents reported that there was shortage of staff (79.5%); 68.1% reported that they did not feel safe and did not have the necessary resources (66.3%). Most of the respondents reported that they had the necessary skills (72.3%).

**Table 4.5: Level of Satisfaction according to socio-demographic characteristics of participants**

Socio demography		Total	Not satisfied	Satisfied	P value
Occupation	Prof nurse	99	76 (76.8)	23 (23.2)	X = 5.117
	Enrolled nurse	32	24 (75.0)	8 (25.0)	P = 0,038*
	Nursing assistant	35	20 (57.1)	15 (42.9)	
Gender	Male	23	13 (56.5)	10 (43.5)	X = 3.314
	Female	143	107 (74.8)	36 (25.2)	P = 0.062
Age	< 40yrs	86	58 (67.4)	28 (32.6)	X =2.093
	>40yrs	80	62 (77.5)	18 (22.5)	P = 0.101
Marital status	Not Married	93	68 (73.1)	25(26.9)	X = 4.233
	Married	73	52 (71.2)	21 ( 28.8 )	P = 0.776
Work experience	≤ 10yrs	84	58(76.2)	26 (23.8)	X =3.418
	> 10yrs	82	62 (75.6)	20 (24.4)	P = 0.550

Table 4.5 shows there was a significant association between levels of satisfaction and occupation (P=0,038); and no significant association between levels of satisfaction and gender, age, marital status and work experience (P = 0.062, 0.101, 0.776, 0.550) respectively.

**Table 4.6: Workload according to socio - demographic characteristics of participants**

Socio demography		Total (n)	High workload	Acceptable workload	P value
Occupation	Prof nurse	99	90 (90.9)	9 (9.1)	X =8.093
	Enrolled nurse	32	26 (81.3)	6 (18.7)	P =0.005*
	Enrolled nursing assistant	35	25 (71.4)	10 (28.6)	
Gender	Male	23	16 (69.6)	7 (30.4)	X = 4.934
	Female	143	125 (87.4)	18 (12.6)	P =0.035*
Age	< 40yrs	86	67 (77.9)	19 (22.1)	X = 6.900
	>40yrs	80	74 (92.5)	6 (7.5)	P = 0.007*
Marital status	Not married	93	79 (84.9)	14 (15.1)	X = 2.687
	Married	73	62 (84.9)	11 (15.1)	P= 0.790
Work experience	≤ 10yrs	84	67 (83.3)	17 (16.7)	X= 5.668
	>10yrs	82	74 (83.3)	8 (16.7)	P = 0.079

Table 4.6. Shows that there was a significant association between the workload and occupation, gender, and age (P = 0.005, 0.035, 0.007) respectively. Also that there was no significant association between levels of workload and marital status, work experience (P = 0.790, 0.079) respectively.

**Table 4.7: Health aspect according to socio - demographic characteristics of participants**

Socio demography		Total (n)	Does not affect health	Affect health	P value
Occupation	Prof nurse	99	20(20.2)	79(79.8)	X= 2.134
	Enrolled nurse	32	9(28.1)	23(71.9)	P = 0.152
	Nursing assistant	35	11(31.4)	24(68.6)	
Gender	Male	23	9(39.1)	14(60.9)	X = 3.299
	Female	143	31(21.7)	112(78.3)	P = 0.064
Age	<40yrs	86	30(34.9)	56(87.5)	X= 11.354
	>40yrs	80	10(12.5)	70(87.5)	P= 0.001
Marital status	not married	93	24(25.8)	69(74.2)	X= 2.308
	Married	73	16(21.9)	57(78.1)	P=0.338
Work experience	≤ 10yrs	84	24(28.6)	60(71.4)	X=7.757
	>10yrs	82	16(19.5)	66(80.5)	P=0.320

Table 4.7: shows that there was a significant association between health aspect and age (P = 0.001) there was no significant association between health aspects and occupation, gender, marital status and work experience (P = 0.152, 0.064, 0.338, 0.320) respectively.

**Table 4.8: Cross tabulation of resources according to the socio - demographic variables.**

Socio demography		Total	No resources	Adequate resources	p value
Occupation	Prof nurse	99	71 (71.7)	28 (28.3)	X =10.987 P =0.006*
	Enrolled nurse	32	24 (75)	8 (25)	
	Nursing assistant	35	15 (42.9)	20 (57.1)	
Gender	Male	23	15 (65.2)	8 (34.8)	X =0.013 P =0.541
	Female	143	95 (66.4)	48 (33.6)	
Age	< 40yrs	86	51(59.3)	35 (40.7)	X =3.870 P =0.035*
	>40yrs	80	59 (73.8)	21 (26.2)	
Marital status	Single	78	51 (63.4)	27 (34.6)	X = 5.821 P =0.819
	Married	73	50 (68.5)	23 (31.5)	
	Divorced	5	1 (20.0)	4 (80.0)	
	Widowed	10	8 (80.0)	2 (20.0)	
Work experience	2yrs – 5yrs	42	28 (66.7)	14 (33.3)	X =1.701 P =0.677
	6yrs – 10yrs	42	25 (59.5)	17 (40.5)	
	11yrs – 15yrs	24	18 (75)	6 (25)	
	More than 15yrs	58	39 (67.3)	19 (32.7)	

Table 4.8: Shows that there was a significant association between resources and occupation and age (P = 0.006, 0.035) respectively. However there was no significance association between gender, marital status and work experience (P= 0.541, 0.819, 0.677) respectively.

**4.9: Cross tabulation of self-reported concerns about personal safety according to socio - demographic variables**

Socio demography		Total (n)	Not safe	Safe	P value
Occupation	Prof nurse	99	70(70.7)	29(29.3)	X= 2.453 P= 0.188
	Enrolled nurse	32	23(71.9)	9(28.1)	
	Nursing assistant	35	20(57.1)	15(42.9)	
Gender	Male	23	12(52.2)	11(47.8)	X= 3.105 P= 0.079
	Female	143	101(70.6)	42(29.4)	
Age	< 40yrs	86	56(65.1)	30(34.9)	X= 0.717 P= 0.398
	>40yrs	80	57(71.3)	23(28.7)	
	Married	73	53(72.6)	20(27.4)	

Table 4.9: shows there was no significant association between situational factors and all variables which are occupation, gender, age, marital status and work experience (P = 0.188, 0.079, 0.398, 0.207, 0.314) respectively.

**Table 4.10: Support services versus socio - demographic characteristics of participants**

Socio demography		Total	Not adequate	Adequate	P value
Occupation	Prof nurse	99	71 (71.7)	28 (28.3)	X =4.390
	Enrolled nurse	32	24 (75.0)	8 (25.0)	P = 0.098
	Nursing assistant	35	19 (54.3)	16 (45.7)	
Gender	Male	23	18 (78.3)	5 (21.7)	X =1.141
	Female	143	96 (67.1)	47 (32.9)	P = 0.287
Age	< 40yrs	86	60 (69.8)	26 (30.2)	X =0.099
	>40yrs	80	54 (67.5)	26 (32.5)	P= 0.441
Marital status	Single	78	58 (74.4)	20 (25.6)	X= 3.722
	Married	73	48 (65.8)	25 (34.2)	
	Divorced	5	2 (40.0)	3 (60.0)	P=0.113
	Widowed	10	6 (60.0)	4 (40.0)	
Work experience	2yrs – 5yrs	42	32 (76.2)	10 (23.8)	X = 4.235
	6yrs – 10yrs	42	25 (59.5)	17 (40.5)	
	11yrs – 15yrs	24	19 (79.2)	5 (20.8)	P = 0.551
	More than 15yrs	58	38 (65.5)	20 (34.4)	

Table 4.10: Shows there was no significant association between the support that was given to participants by management and supervisors and all the variables which are occupation, gender, age, marital status and work experience with a (P = 0.098, 0.287, 0.441, 0.113 0.551) respectively.

**Table 4.11: Knowledge and skills according to the socio - demographic characteristics of participants**

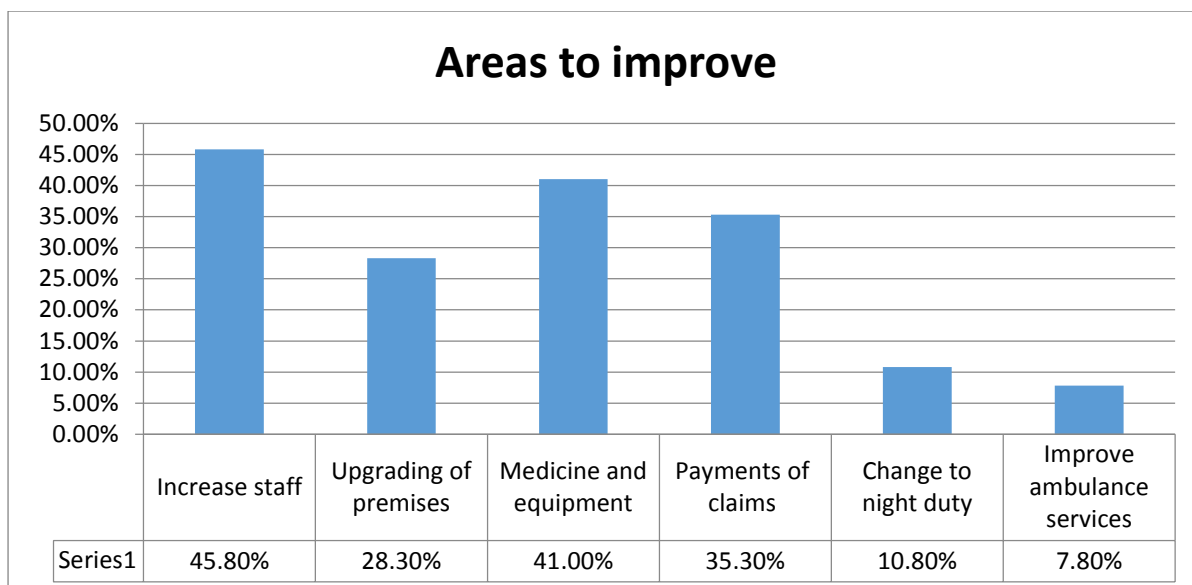
Socio demography		Total (n)	Inadequate	Adequate	P value
Occupation	Prof nurse	99	28(28.3)	71(71.7)	X= 5.829
	Enrolled nurse	32	13(40.6)	19(59.4)	P= 0.262
	Nursing assistant	35	5(14.3)	30(85.7)	
Gender	Male	23	8(34.8)	15(65.2)	X= 0.667
	Female	143	38(26.6)	105(73.4)	P= 0.280
Age	<40yrs	86	22(25.6)	64(74.4)	X= 0.404
	>40yrs	80	24(30)	56(70.0)	P= 0.322
Marital status	Single	78	24(30.8)	54(69.2)	X= 3.887
	Married	73	21(28.8)	52(71.2)	P= 0.114
	Divorced	5	0(0.0)	5(100.0)	
	Widowed	10	1(10.0)	9(90.0)	
Work experience	2yrs-5yrs	42	11(26.2)	31(73.8)	X= .505
	6yrs- 10yrs	42	11(26.2)	31(73.8)	P0.581
	11yrs – 15yrs	24	6(25.0)	18(75.0)	
	More than 15yrs	58	18(31.0)	40(69.0)	

Table4.11: Shows there was no significant association between knowledge and skills with all the socio - demographic variables, which are occupation, gender, age, marital status and work experience (P = 0.262, 0.280, 0.322, 0.114, 0.581) respectively.

**Table 4. 12: Staffing according to Socio - demographic characteristics of participants.**

Socio demography		Total (n)	Not adequate	Adequate	P value
Occupation	Prof nurse	99	86 (86.9)	13 (13.1)	X = 8..527 P = 0.004*
	Enrolled nurse	32	23 (71.9)	9 (28.1)	
	Nursing assistants	35	23 (65.7)	12 (34.3)	
Gender	Male	23	17 (73.9)	6 (26.1)	X = 515a P = 0.319
	Female	143	115 (80.4)	28 (19.6)	
Age	< 40yrs	86	64 (74.4)	22 (25.6)	X = 2.849 P = 0.067
	>40yrs	80	68 (85.0)	12 (15.0)	
Marital status	Single	78	63 (90.8)	15 (19.2)	X = 5.544 P = 0.837
	Married	73	58 (79.5)	15 (20.5)	
	Divorced	5	2 (40.0)	3 (60.0)	
	Widowed	10	9 (90.0)	1 (10.0)	
Experience	2yrs -5yrs	42	37 (88.0)	5 (12.0)	X =14.014 P = 0.419
	6yrs – 10yrs	42	25 (59.5)	17(40.5)	
	11yrs – 15yrs	24	20 (83.3)	4 (16.7)	
	More than 15yrs	58	50 (86.2)	8 (13.8)	

Table: 4. 12: Shows that there was a significant association between the staffing and occupation (P = 0.004) and no significant association between gender, age, marital status and experience. (P = 0.319, 0.067, 0.837, 0.419) respectively.



**Figure 4.4 Areas that need to be improved in order to strengthen the on call strategy according to participants as reported by respondents**

Figure 4.4 Shows that 45.8% of the participants feel that shortage of staff is a priority, followed by provision of adequate medicines and equipment at 41.0%, payments of claims within two months at 35.3%, changing the on call strategy to night duty at 10.8% and lastly, improving the turnaround time of ambulances (7.8%).

#### 4.5 Summary

This chapter presented the analysis of results. The following chapter will discuss the results of the study, conclude the study and give recommendations.

## CHAPTER 5

### DISCUSSION, CONCLUSION AND RECOMMENDATION

#### 5.1 INTRODUCTION

The aim of the study was to determine the attitudes and experiences of nurses when implementing the 24-hr on call system strategy in Greater Tzaneen Sub-District clinics (Limpopo Province). This chapter will include the following areas: discussions which will address each objective individually, a conclusions statement, recommendations and limitation of the study based on the results in chapter four.

Objectives:

*Objective 1: To determine socio demographic profile of nurses in clinics implementing the 24-hr on call strategy in Greater Tzaneen sub - district clinics.*

*Objective 2: To determine the experience of nurses in implementing the 24-hr on call strategy in Greater Tzaneen sub - district clinics.*

*Objective 3: To determine the attitudes of nurses on the implementation of 24-hour on call strategy in Greater Tzaneen sub - district clinics.*

## 5.2 DISCUSSION

### Introduction

Mopani district is a rural area in Limpopo, therefore, challenges in this rural area are more likely to influence their compliance to on call strategy in this district. WHO, (2010) report suggests that challenges that exist in rural areas are unique and therefore nurses require special training for adaptation to their working environment. This means that, more training should be done for those who are to be tasked to provide on call services, which in turn will ensure that rural areas retain their staff.

**Objective 1:** *To determine socio - demographic profile of nurses in clinics implementing the 24-hr on call strategy in Greater Tzaneen sub- district.*

### Gender, age and marital status.

The results of this study revealed that the majority of the respondents were females as compared to males. The nursing profession is mainly dominated by females throughout the world, including South Africa, it is therefore not surprising that the majority of respondents were females. This is confirmed by statistics from the South African Nursing Council (SANC, 2014) which reports that 84.4% of professional nurses are females and only 15.6% are males in Limpopo Province. The fact that women form a large part of professional nurses in this province, implies that their needs which include safety at work, traditional role as family caretakers and the reproductive role must be understood and translated into workplace policies, in order to address staffing needs especially in rural areas (Dussault and Franceschini, 2006).

The results of this study showed that just over half of the respondents were less than 40 years of age implying that they are at child - bearing age, and some are starting

families, hence it is important that workplace policies accommodate these personal factors that significantly influence their willingness to work at awkward times of the day, like night duty and 24hrs on call strategy. According to Van der Waldt and Du Toit (1998) young professionals do not have adequate experience and training to carry duties that are needed during on call sessions by themselves. Van der Waldt and Du Toit (1998) further suggests that young nurses need continuous development in order to enhance their experience.

The fact that 56% of respondents are not married in this current study, means that they may be less compliant, however, even married ones still need to care for the family especially during the night, therefore may also not be so compliant to work 24-hr on-call strategy. According to Rao, Ramani, Murthy, Hazarika, Khandpur, et al (2010), married people experience challenges when it comes to working after hours, especially if they are raising young children.

### **Occupation and hours worked during the on call strategy.**

The results of this study revealed that most of the respondents were professional nurses as compared to other nursing categories. According to the staff establishment of Mopani District (2014) there are more posts allocated to professional nurses as compared to those of enrolled nurses and enrolled nursing assistants. Because of the general shortage of health personnel in South Africa and other developed countries such as Australia, most countries have adopted a strategy similar to that of Limpopo Province by allocating professional nurses to work on call strategy especially in rural areas (National Rural Health Alliance, 2005). However due to critical staff shortage in this province the on call strategy has been extended to other

nursing categories such as enrolled nurses and enrolled nursing assistants. This practice of involving enrolled nursing assistants has also been practised in other countries like Guatemala where critical staff shortages were experienced (Hernandez, Hurting, Dahlblom and Sebastian, 2012). This means therefore that challenges will be experienced during service delivery because less qualified personnel are used in this province, unless they are adequately trained to deal with demands of on call strategy.

The results of this study further revealed that the majority of nurses worked for more than six extra hours when on call per week, primarily due to communities within this rural areas who depend solely on the clinics within their communities for health related services. WHO (2010) reported that only a third of nurses are deployed in rural areas compared to two - thirds that are deployed in urban areas in most of the countries. The fact that fewer nurses are working in rural areas, means that they are likely to work longer hours and more frequently to cover for critical staff shortage. According to Nyonator, Abgadza, Gbeddy, Nyarku, Jones, Miller, and Phillip (2002) when nurses are allocated within the community they are expected to work for 24-hr when there is a need, which further put a lot of strain on them and can lead to burnout. Even in areas where there is no on call strategy, nurses within rural communities are often requested to assist in cases of emergency, causing the nurses to work around the clock all the time. This further puts a lot of strain on nursing professionals, especially those that work and reside within rural communities.

**Objective 2:** *To determine the experience of nurses in implementing the 24-hour on-call strategy in greater Tzaneen sub district clinics.*

The results of the study revealed that most of the nursing staff have worked for less than 10yrs, it means that it is difficult to retain staff within the rural areas, and hence there is a high staff turnover all the time. Reid (2004) reported that as a strategy to retain staff in rural areas the South African government introduced rural allowance for those staffs who work in the rural areas. However, this retention strategy is failing to achieve what it was meant for because we still experience high staff turnover in rural areas of Limpopo, leading to new staff being employed more frequently. Literature suggests that nurses working in rural communities are supposed to provide care responsive to client's needs, encourage public responsibility and deliver comprehensive care (Stanhope and Lancaster, 1996). However this can be accomplished provided management support new staff, using the workplace as an active learning environment, providing newly qualified nurses working in rural areas with opportunities to gain experience (Nel, Werner, Haasbroek, Poisat, Sono and Schultz, 2008). Booyens (1998) also suggest that it is the responsibility of each organization to ensure that the quality of its employees work - life is improved by ensuring that they receive continuous personal and professional development, as the quality of care rendered to the community is directly linked to their knowledge, skills and experience.

The fact that most of the respondents were young (< 40yrs) means that they were in the path of self-discovery, therefore there was a need for clinical improvement, personal advancement and occupational progress to increase their experience and retain them within rural areas. This would mean that financial incentives was not the

only significant consideration when it comes to their decision to work in rural areas or not, but coupled with that, continuous skills development is strengthened for those who choose to work in the rural areas (WHO, 2004).

The fact that most nurses working in the rural area of greater Tzaneen have worked for less than 10 years, implies that most of them could have less work experience. It is therefore ideal that the allocation of nurses in facilities should be a mix of experienced nurses with the newly qualified nurses in order to maximize the transfer of learning under supervision and promote compliance with strategies of providing comprehensive care. However, this is not always possible, especially in areas where there is critical shortage of staff within rural areas, leaving fairly new staffs to make decisions on critical cases.

WHO (2010) in its report on increasing access to health workers in remote and rural areas, recommended that countries must develop and support career development programmes that provide senior posts for health workers in rural areas that will help them move up the career path based on experience, education and training. This will ensure that there are sufficient numbers of skilled and motivated health workers at the right time to deliver effective health services and improve health outcomes and reduce the high staff turnover.

The results of the study revealed that most of the professional nurses were not satisfied with their job because remuneration for overtime was not paid on time and the amount was inadequate for the hours worked during on call system. Similarly, Rao et al., (2010) also reported that nurses felt they were underpaid and extra hours worked were not paid on time, as compared to the private sector. WHO (2010)

recommended that countries should use a combination of financial incentives that are sustainable like hardship allowances, grants for houses and free transportation to outweigh the perceived cost associated with working in rural areas by health workers and improve rural retention. Also, it is suggested that senior management should explain to nurses how payment is calculated in order to improve their satisfaction rates and so that they look forward to working after-hours.

The results of the study also showed that the majority of professional nurses felt that there was a high workload in the clinics, which was also exacerbated by having to work during day and night. Because professional nurses are at a higher level, their tasks and responsibilities are different from that of other lower nursing categories, and they are also responsible for supervising nursing assistants on top of their prescribed duties. Thipanyana and Mavundla (1998) also found that the majority of nurses working in rural clinics, complained of heavy workload which was associated with understaffing with high staff turnover.

The results of the study also showed that a majority of professional nurses felt that the on-call strategy was affecting their health. Studies conducted by Mohale and Mulaudzi (2008), showed that the health of professional nurses working in rural areas were experiencing emotional (mental health) and physical strain as a result of staff shortage, poor conditions of services and high staff turnover. These led to compromised productivity, performance and quality of patient care.

The results of the study also showed that more than half of the respondents felt they were not supported by management and supervisors especially during the on-

call system. According to Phillips, Stone and Phillips (2001), it is the responsibility of the management to focus on improving knowledge, expertise and competencies of the staff they lead. Nurses who felt less supported were those less than 40 years and those with less than 10 years of service. Similarly, Chipp, (2011) and Hernandez, Hurting, Dahlblom and Sebastian (2012) found that nurses working in rural areas felt that there was insufficient supervision, training and continuing education opportunities. Bearing in mind that most of these young professionals are not married, and can leave anytime where better opportunities presented themselves. It is important to ensure that they are supported in their quest to improve their knowledge and skills within the rural areas in order to retain them.

**Objective 3:** *To determine the attitudes of nurses on the implementation of 24-hour on call strategy in Greater Tzaneen sub - district clinics.*

### **Management factors**

The results of the study showed that most of the professional nurses felt that they did not have adequate resources to provide care, especially after hours. This can be linked to the different level of care provided by each nursing category with professional nurses being the pillar of the services and providing most of the clinical care. Khamisa, Olden, Peltzer, and Ilic, (2015) also reported that professional nurses working in rural communities felt that shortage of resources affected their provision of care.

The results of the study revealed that more than half of the respondents reported that they had adequate skills and knowledge on managing 24 -hour on call strategy. However, management need to develop a training programme to address the skills

gap for the staff who reported that they did not have adequate skills, in line with the consensus of the different government departments in South Africa which puts education and training as a critical factor for service delivery (Department of Labour, 2006). Chipp et al., (2011) also reported that health professionals working in rural areas had challenges including less continuing education opportunities, training and feeling of isolation to deal with the health needs of communities.

The results of the study revealed that more than half of the respondents didn't feel safe within the clinic premises in spite of the fact that the Limpopo Department of Health has contracted security guards for each health facility in Greater Tzaneen sub- district. A third of the nurses felt that there was inadequate accommodation arrangements when the on call strategy was provided. In a study conducted by Khamisa et al., (2015) security risk was identified by nurses working in rural areas as one of the factors that contributed to work related stress. Also, the efforts of the government in providing security services in most of the clinic is meant to provide safety for staff working in the clinic and the property itself, however, according to the respondents in this study there is still issues regarding safety in the premises where they work.

The results of the study revealed that more than half of the respondents felt that there was inadequate staff in the clinics to provide the 24-hour on call strategy. Of the nurses who reported that there was inadequate staffing in rural areas, two thirds were professional nurses. This can be associated with the different level of skills, responsibilities and clinical care that are provided by each category when implementing the 24-hour on call strategy. Similarly, Nyongator et,al. (2002) conducted a study on provision of health care in rural areas of Ghana and found that

the shortage of relief nurses in provision of 24-hour services led to the nurse having to work for longer periods and experienced burnout or the interruption of services.

**Areas that need to be improved to strengthen the 24hours on-call strategy.**

Most of the nurses identified the following areas that they felt needed to be improved in order to strengthen the on call strategy, prioritized as follows: More than one third of the respondents felt that there was a need to upgrade the nurses' home and clinic facilities; increasing the staffing; provision of adequate medicine; turnaround time payments of claims should be reasonable. Other suggestions included a suggestion to change the on call strategy to night duty and improve ambulance turnaround time. These suggestions were also supported by a number of studies, where it was reported that staff shortage was critical in most rural areas of South Africa and had led to serious staff burnout, (Moustaka and Constantinidis, 2010). According to Moustaka and Constantinidis, (2010), nurses are also subjected to more general stress which arises from the physical, psychological, and social aspects of the work environment. Patient care is usually adversely affected due to higher levels of stress in staff which may result in staff burnout and turnover. According to Meyer et al., (2008), job satisfaction can be influenced negatively by poor salaries. In order to augment these poor salaries, most nurses find themselves moonlighting, though this is not common among those nurses that work in rural settings. Therefore, it is important for Human Resources to process overtime claims on time and correctly calculate amounts that are due to nurses who work 24-hour on call strategy.

A Study by Chingarande and Bekezela, (2013) revealed that, the most common antecedent of occupational stress were: overwork/accelerated work pace,

inadequate pay, inadequate holiday, too much pressure and lack of recognition. These aspects are very familiar with nurses who work in the rural settings who also reported similar challenges in this study. This is worsened by them having to work 24-hour on call strategy, despite experiencing challenges of scarcity of continuous staff training and poor infrastructure, equipment and human resources.

### **5.3 Conclusion**

This study provided us with relevant information on the challenges and attitudes that nurses working in clinics had with regard to implementing the 24-hour on call strategy.

According to the study there is a need to improve the working conditions of nurses working in clinics that are in the rural areas in Limpopo Province. From these results, it is apparent that nurses do have the necessary skills and knowledge to provide quality patient care but have limited resources like equipment and some of the pharmaceutical supplies.

The nurses felt that the strategy was affecting their health especially because of the high workload which is further compounded by the shortage of staff in clinics and the fact that communities rely solely on clinics as they are nearer their homesteads. However, nurses see the benefit of the strategy to the communities and are not against it.

The nurses felt that management was not supportive when they had personal challenges and had to wait for a long time to be upgraded in order for them to provide quality patient care

## **5.4 Recommendations**

The provincial department should invest in the project of upgrading nurse's homes and clinics in order to improve the living conditions and cater for the growing population and strengthen the district health system. The working conditions for nurses working in clinics need to be improved.

There should be continuous training of nurses that are allocated in rural areas which is based on rural health topics in order to improve skills and competencies. The province should design continuing education and professional development programmes for nurses working in rural areas in order to encourage rural retention and career pathway.

It is important that management at all levels provide a supportive supervision and mentoring role when visiting the facilities and that meetings are held at least on a quarterly basis with staff to address their concerns.

The above recommendations will need an integrated management plan in order that all the role players are co-opted, and role clarification is done.

## **5.5 Limitation of the study**

The instrument that was used was a self-reporting measure and the information obtained is based on the response from participants and was subjective. It might happen that in some of the experience and attitude questions the participants either exaggerated or under rated their reporting on the hours worked, year of service and turnaround time of the ambulance.

The findings of the study may not be generalised as health care providers in other provinces might have strategies that are different.

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## APPENDIX

### 7.1: Research questionnaire

#### Details for answering the questionnaire

This research questionnaire focuses on the views of nurses on the on call strategy.

A specific focus is on the respondent's demographic information, guidelines on the strategy, the benefits of the strategy on patients and the nurses, the experiences of the strategy on both patients and nurses and the nurse's attitudes.

Please answer this questionnaire from your personal point of view (and not from a possible Group's perspective).

Please select the most appropriate answer(s). In the case that you cannot answer a specific question, please skip it.

**Please submit this questionnaire before the end of two days.**

**Thank you very much for your participation.**

Demographic information( please tick the relevant statement)		
<b>1. Educational level</b>	<b>Less than matric = 1</b>	
	<b>Matric = 2</b>	
	<b>College or University = 3</b>	
<b>2. Occupation</b>	Professional nurse= 1	
	Enrolled nurse( staff nurse) = 2	
	Enrolled nursing assistant = 3	
<b>3. Gender</b>	Male = 1	
	Female = 2	

<b>4. Age range</b>	< 20years = 1	
	21 – 30 years = 2	
	31 – 40 years = 3	
	41 – 50 years =4	
	50years and above = 5	
<b>5. Marital status</b>	Single = 1	
	Married = 2	
	Divorced = 3	
	Widowed =4	
<b>6. How long have you been employed in PHC ( tick the appropriate range)</b>	2years – 5 years = 1	
	6 years – 10 years = 2	
	11years – 15 years = 3	
	More than 15 years	
<b>7. Tick the average extra number of hours you worked in the previous week you were on call</b>	1 – 2hours = 1	
	3 – 4 hours = 2	
	5 – 6 hours = 3	
	Above 6 hours = 4	

**APPENDIX: 7.1.2. Attitude and experience questionnaire**

Indicate with an “x “in the appropriate space below

<b>8. Job satisfaction</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I am satisfied with my job					
The on call strategy suite my life style					
My schedule is flexible so that when the need arise for asking for a day off I am able to rearrange my shift					
I am satisfied with the amount of pay I received for standby and overtime					
I like working after normal working hours					
<b>9. Workload</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I feel exhausted and fatigued much of the time due to working during the day and being on standby					
I think I could do a better job if I didn't have to sometimes work during the day and be on call at night					
I feel I carry a heavy workload when on call than when I am working normal					

hours					
<b>10. Health aspect</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I feel like the on call strategy is affecting my health					
I experience difficulty in falling asleep after my on call shift					
There is high absenteeism in my clinic due to the on call strategy					
<b>11. Resources</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The pharmaceutical resources that I receive motivates me to provide care when on call					
The medical equipment that is in the clinic assist me to provide comprehensive care when on call					
<b>12. Work environment</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I like assisting all patients even after the normal working hours when on call					
<b>13. Situational factors</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
There is adequate accommodation for					

me when I am on call					
I feel my clinic is secured, especially when I am on call					
<b>14. Support services</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The ambulance turnaround time when I am on call is within 60 minutes					
When on call management listen and respond to my concerns					
When on call and there are challenges in the clinic my supervisor is supportive					
<b>15. Knowledge and skills</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I have the necessary knowledge to deal with emergencies when on call					
If I am not sure on how to treat a patient when on call I can contact the referral hospital for assistance					
<b>16. Staffing</b>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I feel my clinic is adequately staffed most of the time to cater for the on call strategy					

**17. indicate below the areas that need to be improved in order to strengthen the on call strategy**


## **Information sheet for potential participants**

Title of the study: A study of the attitudes and experiences of nurses on the on call 24- hour strategy in Greater Tzaneen sub - district.

### **Purpose and background**

I am an employee of Mopani Department of Health and currently studying for a part-time Master`s Degree in Public Health in University of Limpopo (Medunsa Campus) School of Public Health. The objective of this quantitative research is to look into the implementation of 24-hour on call strategy at clinics in Greater Tzaneen sub district. I would appreciate you agree to participate in this study.

### **Procedures**

The study will involve you completing the questionnaire that is attached to this letter. It is a four - part questionnaire with separate questions for demography, attitudes, experiences and recommendations. The questionnaire will only take 15 minutes of your time to complete. I would kindly ask you to answer questions truthfully and independently without discussion with others to allow for more accurate results. Confidentiality and anonymity will be fully assured, as your name is not required on the questionnaire. Only the research team will have access to the actual documents.

### **Consent to participate**

Participation or non-participation in this research will not affect you in anyway. If you choose to participate you are allowed to withdraw at any time with no prejudice and penalties. The information collected will only be used for the study. If you are willing to participate in the study kindly fill in the attached informed consent.

If it does happen that you have queries or concerns please do not hesitate to contact me for clarity at the following number 0726015734 or 015 8116503(Thembehle Nyathi).

Thank you for taking time to read this letter and for completing the questionnaire.

Your participation will be greatly appreciated.

**APPENDIX 7.2: Consent Form**

**Number:** -----

**UNIVERSITY OF LIMPOPO (MEDUNSA CAMPUS) CONSENT FORM**

**Name of study: A study of the attitudes and experiences of nurses on the on call 24 - hour on call strategy in Greater Tzaneen sub - district.**

I have read the information on the aims and objectives of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issues.

The aim and objectives of the study are sufficiently clear to me. I have not been pressurised to participate in any way.

I understand that participation in this study is completely voluntary and I may withdraw from it at any time and without supplying reasons. This will have no influence on the performance of my duties neither will it influence the relationship with my manager.

I know that the study has been approved by the Medunsa Campus Research and Ethics Committee (MREC), University of Limpopo (Medunsa Campus). I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

-----  
Name of participant

-----  
Signature of participant

-----  
Place

-----  
Date

-----  
Witness

Contact details:-----

**Statement by the Researcher**

I provided verbal and written information regarding this study.

I agree to answer any future questions concerning the study as best as I am able.

I will adhere to the approved protocol.

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Name of researcher

Signature

Date

### **APPENDIX 7.3: Letter to request permission**

P.O. Box 106  
Letaba  
0870

The HOD

Limpopo Department of Health  
Private Bag X 9302  
Polokwane  
0700

Dear Dr. Kabane S.

**Re: Request for permission to conduct a study in Greater Tzaneen sub district clinics**

I am currently an employee of the Department of Health based in Mopani District Office. I hereby request permission to conduct a study on employees based in clinics within Greater Tzaneen sub - district. I am currently enrolled as a part - time student for a Master of Public Health Degree at the School of Public Health University of Limpopo (Medunsa Campus), and am required to submit a research report in partial fulfilment of the requirements for completion of my degree.

The aim of my research study is to look into the implementation of 24- hour on call strategy within clinics in Greater Tzaneen sub district. The study will help to identify the attitudes, challenges and recommendations from nurses. The protocol has been submitted to the Medunsa Research Ethics Committee for ethical clearance.

The research can only be conducted after the approval by the university ethics committee has been granted.

Participants will be required to give informed consent prior to participating in the study, and their rights to participate voluntarily will be communicated to them. Participants will also have a right to withdraw from the study at any time without any prejudice or penalties. The results of the study will be shared with the department.

Yours Sincerely

Thembelihle Nyathi

Cell phone number: 0726015734

Telephone number: 015 8116503

## Appendix: 7.5. Budget and time frame

### Time frame

<b>Activity</b>	<b>Time period</b>
Develop proposal	January – March 2014
Ethical approval	May 2014
Seek permission from the department	May 2014
Data collection	June 2014
Data analysis	July – August 2014
Report writing	September – mid November 2014
Submission of first draft	Late November 2014
Submission of final draft	December 2014
Graduation	April 2015

<b>Activity</b>	<b>Amount</b>
Stationery	R1500.00
Telephone calls	R250.00
Travel expenses	R1500.00
Editing and binding	R5000.00
Total	R8 250.00



**MEDUNSA RESEARCH & ETHICS COMMITTEE**

**CLEARANCE CERTIFICATE**

**MEETING:** 09/2014  
**PROJECT NUMBER:** MREC/HS/357/2014: PG

**PROJECT:**

**Title:** Attitudes and experiences of nurses in the implementation of 24 hours on call strategy in Greater Tzaneen sub district clinics in Mopani district Limpopo province

**Researcher:** Ms TB Nyathi  
**Supervisor:** Prof L Skaal  
**Department:** Medical Science, Public Health & Health Promotion  
**Degree:** MPH

**DECISION OF THE COMMITTEE:**

MREC approved the project.

**DATE:** 06 November 2014

  
**PROF GA OGUNBANJO**  
**CHAIRPERSON MREC**



The Medunsa Research Ethics Committee (MREC) for Health Research is registered with the US Department of Health and Human Services as an International Organisation (IORG0004319), as an Institutional Review Board (IRB00005122), and functions under a Federal Wide Assurance (FWA00009419)  
Expiry date: 11 October 2016

**Note:**

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol. PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.