EXPLORING HEALTH PROFESSIONALS' ROLES IN CERVICAL CANCER PREVENTION AT SELECTED GATEWAY CLINICS IN VHEMBE DISTRICT, LIMPOPO PROVINCE

BY

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DECLARATION

I, Mukwevho Vuwani Jessica declare that the dissertation titled "Exploring **Health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province**", hereby submitted for the degree Master of Public Health (MPH) at the University of Venda has not been submitted previously by me at this university or any other institution; that it is my own work in design and in execution and that the sources that I have quoted have been indicated and acknowledged by means of complete references.

Mukwevho VJ Date:

DEDICATION

To my beautiful family, this is for you!!

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LIST OF ACRONYMS AND ABBREVIATIONS

ACCP	Alliance for Cervical Cancer Prevention
AIDS	Acquired Immunodeficiency Syndrome
CIN	Cervical Intraepithelial Neoplasia
DNA	Deoxyribo-Nucleic Acids
GAVI	Global Alliance for Vaccines and Immunizations
HIV	Human Immunodeficiency Virus
HPV	Human papillomavirus
LEEP	Loop Electrosurgical Excision Procedure
PAP smears	Papanicolaou
UK	United Kingdom
WHO	World Health Organisation

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ABSTRACT

Despite availability of cervical cancer screening in health institutions, cervical cancer remains to be one of the top five most important causes of morbidity and mortality in South Africa and the world at large. Nurses have an important role in cancer prevention and health education. The purpose of this study was to explore and describe Health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province**.** The theoretical framework used in this study was ecological model of health promotion**.** A qualitative explorative and descriptive research design was used for the study. The population of the study was 30 nurses and a purposive convenience sample of 7 professional nurses from the 3 selected clinics were chose to make a total of 21 participants of the study. The data collection method was interviews and the Tesch's open coding method was used for data analysis. The findings revealed that professional nurses had limited knowledge about cervical cancer but they knew the practical aspect of screening women for cervical cancer. Despite having limited knowledge, the nurse provides basic health education about cervical cancer screening. The nurses understood their roles which involves cervical cancer screening, follow up and referring patients to cervical cancer specialist for further diagnosis and treatment. To promote cervical cancer screening, the study recommends the following strategies; increase of health education, awareness campaigns, vaccination programs and increase of staff, equipment and facilities to screen cervical cancer in clinics by the Department of Health to curb the prevalence of cervical cancer amongst women.

Key words: Cervical Cancer, health education, health promotion, health professionals and Nurses

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

Although cervical cancer is preventable, it seems to be an impossibility and yet an undeniable fact that it is one of leading killer diseases of women in South Africa and the world at large. It was rated as the second most common cause of cancer related deaths among older women globally (World Health Organisation (WHO), 2012). This is alarming given the fact that it is preventable and screening facilities are available in all health institutions to women in South Africa. Even though nurses play a key role in health information dissemination about cervical cancer, there seem to be shortcomings concerning women's knowledge and attitudes concerning cervical cancer screening uptake. Health professionals have a key role to play in primary cancer prevention, screening and symptomatic diagnosis. Therefore, exploring and describing health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province is of paramount importance for its potential usefulness in combating the scourge.

1.2 Background

Globally, cervical cancer is the second most common cancer after breast cancer. More than 500,000 women are diagnosed with cervical cancer and 270,000 die of the disease every two minutes annually (W H O, 2012). To combat the cervical cancer problem, the Papanicolau smear (Paps) test was introduced as one of the cervical cancer screening methods. Many developed and developing countries adopted the Pap test. However, despite the positive factors of Pap smear in America, every year, about 14,000 American women are diagnosed with cervical cancer and about 3,900 die from it. This shows that even though, great strides against cervical cancer have been achieved in America, it still proves fatal for many women (Nelson, Geiger and Carol, 2014). In the United Kingdom (UK), cervical screening programs have been successful in securing participation of a high proportion of targeted women but the mortality rates of women suffering from cervical cancer is still high and those suffering from cervical cancer (Fylan, 2014).

In Australia, cervical cancer is the 6th most common cancer in women and leads to 350 deaths in a year. Although, 150 000 Pap smears are taken each year in Ireland, the number of women who die from cervical cancer is significantly high standing high at 200 deaths per year (Wittet and Tsu, 2015). Mortality rates highlights that, Africa is the most affected region with highest rate of cervical cancer (WHO, 2017). In Uganda, cervical cancer is the most common cancer in women with an estimated incidence of 30 per 100,000 women. A study by Mutyaba, Mmiro and Weiderpass (2016) at Mulago Hospital in Uganda revealed that 80% of patients were diagnosed with cervical cancer. Every year In Ethiopia, between 60 to 81 women die from cervical cancer and the age range is getting younger with the youngest between the age-group of 20 to 24 (Yusufu, 2013).

Narrowing down to South Africa, the estimated mortality rate for cervical cancer is 12/100,000 resulting in 3,027 deaths per year. It is estimated that cervical cancer cases and deaths will increase to 7,329 and 4,177, respectively by the year 2025 (HPV Information Centre, 2013). Despite the efforts of South African Department of Health to curb cervical cancer, cervical cancer remains excessively high, cases are often diagnosed late and many patients suffer due to poor response to treatment. The National Department of Health of South Africa developed a policy guideline for cervical cancer screening in the year 2000, to screen at least 70% of women over 30 years of age and 10 years intervals. Presently, cervical cancer program in South Africa offers three cervical cytology smears per lifetime (Department of Health, 2000). The risk factors of cervical cancer include early age at first intercourse or multiple sexual partners (Almeer, Aseel, Al-Khalaf et al., 2015). The Papanicolau smear (Pap) test, visual inspection with acetic acid visual inspection with lugol iodine is also used as for screening of cervical cancer. However, uptake of these methods remains low in South African health institutions (Sudenga, 2013).

Nurses play a very important role in cervical cancer prevention because they provide health promotion and counselling to the patient on a day-to-day practice. They play a significant role in educating patients about cervical cancer and its prevention. Health education remains the corner stone of prevention strategies of any communicable and non-communicable diseases. It forms part of primary prevention in advancing healthy lifestyle behaviours and making individuals communities aware of diseases and prevalence of morbidities and mortalities and how such can be prevented. Shah (2012) reported that it is necessary to make the nursing staff aware about cervical cancer so that they can impart knowledge regarding cervical cancer and its prevention to the general public, since there were shortfalls observed in majority of women lacking knowledge about cervical cancer prevention.

Perry (2014) identified a surplus factors responsible for non-utilisation of screening services such as diagnosis of cancer concerns, cultural-based embarrassments, fear and hopelessness, cost and access, lack of physical referral, perception of test as being uncomfortable and unnecessary. Therefore, this calls for the need of nurses to cut across all these barriers of cervical cancer screening to prevent the disease. Nurses as health workers are the most trusted people to disseminate health information to the general population at health institutions. Generally, patients first meet nurses in primary health care settings, therefore they should encourage female patients to get screened for cervical cancer and provide information about prevention (WHO, 2017). Studies document that nurses play a key role in informing the public on the availability and need for cervical cancer screening services. Their attitude is often important in gaining women's confidence as they are individuals who helps to conduct tests. Hence, it is appropriate to explore and describe their health promotion and prevention role in cervical cancer screening services (Perry, 2014).

Cervical cancer is on the increase and co-morbid with HIV and AIDS, which need nurses to be on the forefront of health promotion and prevention so that women are not faced with dual challenge morbidity. Lack of knowledge about cervical cancer in the population among nurses and other health care workers is a prime barrier for access to cervical cancer prevention (Argutol and Bishop, 2014). It is important that nurses acknowledge new developments in cancer prevention, reduce maternal morbidity by providing primary prevention through health education, screen appropriately and refer to prompt treatment. With the scourge of HIV, there has been an association of cervical cancer and AIDS among women, so the disease seems to be changing its landscape and more research is still underway on preventative measures which makes health professionals to be more knowledgeable about the developments in cervical cancer prevention and take a stance in health education and promotion.

According to Balogun, Odukoya and Oyediran (2012), nurses are instrumental in educating the public about vaccination and increasing awareness about the availability of the tests and the treatment of cervical cancer. According to Singh, Seth, Rani et al., (2012) there is low doctor patient ratio in rural areas of South Africa which makes nursing staff as the major workforce in rural public health clinics and hospitals. Nurses are responsible, as primary gate keepers for giving information about cervical cancer and creating and conducting Pap smear screening tests among rural areas (Singh, Seth, Rani, 2012). Nurses have an important role in cancer prevention and health education. Therefore, knowledge and awareness of cervical cancer are the most important for general women, who are educated by nurses.

In order for hospitals and clinics to have a successful cancer control program, nursing staff must be aware of facts about cervical cancer and screening tests themselves (Shah, 2013). Furthermore, negative attitude toward and inaccurate knowledge of cervical cancer and screening methods among health care providers especially among nurses can pose substantial barriers to cervical control program in health institutions and the communities (Vaishnav and Shrivastava, 2013). Moreover, if nurses themselves undergo screening tests regularly, they can be role models for other females in carrying out cervical cancer screening tests. A study by Udigwe (2013) in Nigeria revealed that nurses had an average knowledge and negative attitude towards cervical cancer screening. They were not aware of the routine screening guidelines and had limited understanding of different types of cervical cancer screening techniques. Therefore, this shows that nurses need to be educated more about cervical cancer. Goyal, Vaishnav and Shrivastava (2013) study revealed that although nurses identify certain aspects of cervical cancer, their knowledge is not complete. Nursing personnel should have a better knowledge of preventable diseases like cervical cancer (Mutyaba, Mmiro, Weiderpass, 2013). A study conducted by Gabriel (2015) revealed that little over half 61% of nurses had knowledge of cervical cancer but only 22 % reported practicing prevention of cervical cancer.

Mutyaba, Mmiro and Weiderpass (2013) notes that the lack of depth on knowledge of cervical cancer in staff nurses can be explained by their training curriculum. According to a study by Chirenje, Chipato and Kasule (2013), only 47% participants obtained knowledge of cervical screening from their curriculum book. Until recently, cervical cancer prevention issue has been the concern of physicians. Therefore, this means that there is an urgent need to integrate cervical cancer prevention issues in the nurses' training curriculum.

Data from different studies such as studies by, Chirenje, Chipato and Kasule (2013); Mutyaba, Mmiro and Weiderpass (2013) found out that levels of knowledge and understanding of cervical cancer as well as its preventable nature should be improved. Continuing nurse education may contribute to strengthen cervical cancer screening programs. Nursing staff, if properly aware of this disease, can educate the masses and hence increase health-seeking behaviour in women (Shah, 2012). Lack of knowledge about cervical cancer in the population among nurses and other health care workers is a prime barrier for access to cervical cancer prevention (Argutol and Bishop, 2015). Most nurses do not know the aetiology of the cervical cancer disease. Cervical carcinoma is a condition that develops at the border of the cervix and the uterus.

According to Ackerson and Pretson (2009), there is need to address women's needs such as knowledge, cultural, emotional, perceptions and barriers to encourage women to use Pap smear services. Studies show that women's perceptions of cervical cancer and screening influence screening uptake (Ndikom and Ofi 2012). In addition, perceived benefits and barriers are linked to screening uptake. Negative perceptions like embarrassment, stigma, fear and pain may decrease uptake of cervical cancer screening (Marlow, Waller and Ward, 2015). Results of a qualitative study conducted in Malawi on barriers to cervical cancer screening show that low perception of threat of the disease and perceived benefits of cervical cancer screening as barriers to screening (Fort, Makin, Siegler, Ault and Rochat, 2011). The study further states that cultural beliefs influenced perceptions of women on cervical cancer screening. Several studies show that fear of being diagnosed with cervical has been identified as a factor that influences utilization of screening services, some women may think a positive cervical cancer screening test is a death warrant (Fort, 2011).

According to Molefe and Duma (2009), in a study conducted in Botswana on experiences of Batswana women diagnosed with both HIV and AIDS and cervical cancer is more distressing than with other cancers. In addition, half of women in a study to determine women's knowledge, attitudes and practice towards cervical cancer state that it is embarrassing to undergo a Pap smear and thought it was not necessary to have a Pap smear unless one has symptoms (Rezaie and Chamani, 2012). Fort 2011) conducted a qualitative study conducted in Malawi on barriers to cervical cancer screening and found out that women lacked knowledge about cervical cancer screening.

There are shortfalls in provision of health education concerning cervical cancer prevention in rural areas. The short falls comprises lack of education materials and shortage of staff in rural areas. A study by Chary and Rohloff (2017) in Guatemala found out that staff turnover, concerns over educational training quality, a need for continued supervision were associated with cervical cancer education in rural communities. A study by Munthali et al (2015) in Malawi found out that there was a shortage of transport for scheduled outreach clinics for cervical cancer educational programs in rural areas. Chary and Rohloff (2017) states that health facilities provides outreach services with the aim of reaching rural and hard to reach communities, informants about cervical cancer screening. Health service providers in a study by Munthali,et al (2015) acknowledges that while health education sessions are continuing, a large population of rural populations are yet to be reached with messages on cervical cancer screening and early treatment programs. Munthali et al (2015) found out that one of the major weaknesses is that there are a few members of staff who are involved in the delivery of cervical cancer screening and early treatment services.

In some facilities only one provider provided these services and he or she was also required to provide antenatal and family planning services among others, hence they were overloaded with work. The authors further indicate that some districts were offering cryotherapy services but these services were not available in neighbouring districts hence they received quite a lot of clients from there as well. In some districts, even though more service providers were trained, the problem was that not all were providing these services. For example, a respondent in Ntcheu said that at the time of the study there were only two providers who were providing services but a total of 13 health workers had attended the training in 2008 (Munthali, Ngwira and Taulo, 2015). Therefore, there is a plethora of shortfalls in provision of health education concerning cervical cancer prevention in rural areas.

According to Fox and Stein (2011), primary care doctors can significantly influence both cervical cancer incidence and mortality rates by screening for cervical cancer with Pap smears and by providing patient education on the risks of developing cervical cancer. Studies have consistently reported that access to health care and a doctors' recommendation are important predictors of cancer screening (Breen and Kessler, 2014). Fox and Stein (2011) states that the incidence and mortality rates for cervical cancer is dependent on the availability of doctors who provide cancer-screening services. This shows that primary health care doctors have an integral role in the prevention, diagnosis, and management of cervical cancer (Breen and Kessler, 2014). Lewis and Jensen (2016) postulate that pprimary care doctors are the gatekeepers to cervix cancer prevention in the South Africa.

Nurses have also received training and can perform pap smears at primary health care clinics. Women should have the best access to primary health doctors and nurses than any other specialist doctor. The reason being that woman see their primary health care doctors and nurses more than any other specialist's doctor does. Thus, primary health care doctors and nurses must be competent in examining the cervix to be able to recognise abnormalities. Concomitantly, they must be able to teach cervical self-examination to patients (Breen and Kessler, 2014). Primary health doctors must also be familiar with risk factors for cervical cancer, how to evaluate cervical cancer, imaging techniques and when to refer to surgeons for further evaluation (Lewis and Jensen (2016).

1.3 Problem Statement

Health education and promotion are the fundamentals of community health and pillars of the nursing profession because nurse's role is to prevent diseases and to restore health. However, nurses have abandoned or shifted their focus and are no longer providing health education and information to individuals, families and communities leading to ignorance and high incidents of health morbidities and mortality. The researcher has observed that segmentation, departmentalisation, and specialisation has contributed to lack of knowledge and attitudes towards cervical cancer prevention. The problem was that most nurses are not aware of additional information, developments and preventive strategies available to prevent cervical cancer. Doctors also underestimate this role and place much emphasis on diagnosis and treatment and fail to advise women during consultation about cervical cancer. A study by Dhiman and Sherma (2017) showed that female nursing staff had average knowledge and positive attitude towards cervical cancer screening.

Majority were not aware of the routine screening guidelines and have limited understanding of different types of cervical cancer screening techniques, hence it is recommended that routine training should be given on regular basis to all the health providers. It is also the prerogative of the Department of Health in ensuring that health education and promotion takes place by providing materials for health education. Health education and promotion measures in rural areas is limited as compared to urban areas, and disparities have been observed across racial class and is mainly enforced during a specific month in the calendar. Health professionals have an important role in cancer prevention and health education. Secondary prevention is the second line of prevention of disease, which imply proper screening through taking adequate smears. Health professionals are failing to take adequate smears and thus Vhembe district had a low adequacy of smears and could not reach the 70% target in 2016/2017 (Vhembe District Health Service 2016/2017 Report), which results in late detection and poor prognosis, increasing cervical cancer morbidity and mortality. Based on the background the researcher explored and described health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province.

1.4 Study Rationale

There are several studies that have been done in South Africa that focuses on knowledge of cervical cancer amongst women, however in Vhembe district no known study have explored and described Health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province**.**

1.5 Significance of the Study

The study results intends to influence policy guidelines in providing educational materials in indigenous languages, the Department of Health in increasing mediums of health education at facilities. Health professionals must realize and appreciate their significance on the impact to cervical cancer prevention. The study provides nurses a chance to realize the importance of professional growth and understanding their roles in health education and promotion regarding the prevention of cervical cancer. The Department of Health to recognize gaps in empowerment strategies to benefit more nurses to be updated and involved in cervical cancer prevention thus reducing the incidences of morbidities and mortality. Women may also benefit from this study because they would be informed about cervical cancer prevention and their responsibilities in owning their own health and can request such services. When they consult at the clinics regarding cervical cancer related problems they will receive full information even how to prevent cervical cancer and how to control it for those who are already affected.

1.6 Purpose

The purpose of this study was to determine health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province.

1.7 Research Question

What is the role of health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province?

1.8 Objectives of the Study

(a) To explore and describe health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province.

1.9 Definition of Concepts

Nurse/ Health professionals

According to Ann (2001), a nurse is a person trained or skilled in caring for the sick and injured people, licensed for that as a professional practitioner. In this study, the operational definition of a health professional, it is a person who provides care for the community in general working at a health institution being a doctor or nurse.

Role

According to Elliot, Hawker and Soanes (2015), a role is a prescribed or expected behaviour associated with a position or status in a group or organisation. In this study, role mean that the prescribed or expected behaviour associated with Nurse/Health professionals in preventing cancer such as providing health education and promotion and performing pap smear as well as referring.

Cervical cancer

According to Cancer Council South Africa (2017), cervical cancer is a malignant tumour found in the tissue of the cervix, which occurs when abnormal cells in the cervix turn into cancer cells. In this study, cervical cancer is an abnormal change found in the tissue of the mouth of the uterus, which occurs when abnormal cells in the mouth of the uterus turn into cancer cells.

Health education

According to World health Organisation (2017), health education is a type of education designed for individuals or the public at large to gain the knowledge, skills, value, and attitudes necessary to promote, maintain, improve, and restore their, or another person's, health. In this study, health education means to increase knowledge about cervical cancer and influencing attitude, which promotes cancer prevention, maintain and improve women's health by health professionals.

Health promotion

According to World health Organisation (2017), Health promotion enables people to increase control over their own health by covering a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life through addressing and preventing the root causes of ill health, not just focusing on treatment and cure. In this study, health promotion means enabling women to address and prevent cervical cancer through offering a wide range of social and environmental interventions such as maintaining safe sexual health practices and maternal health.

Screening

Screening means that detecting cervical cancer before symptoms appear (WHO, 2017). This may involve blood test, urine test and medical imaging. In this study screening means taking or performing a pap smear or taking blood for HPV

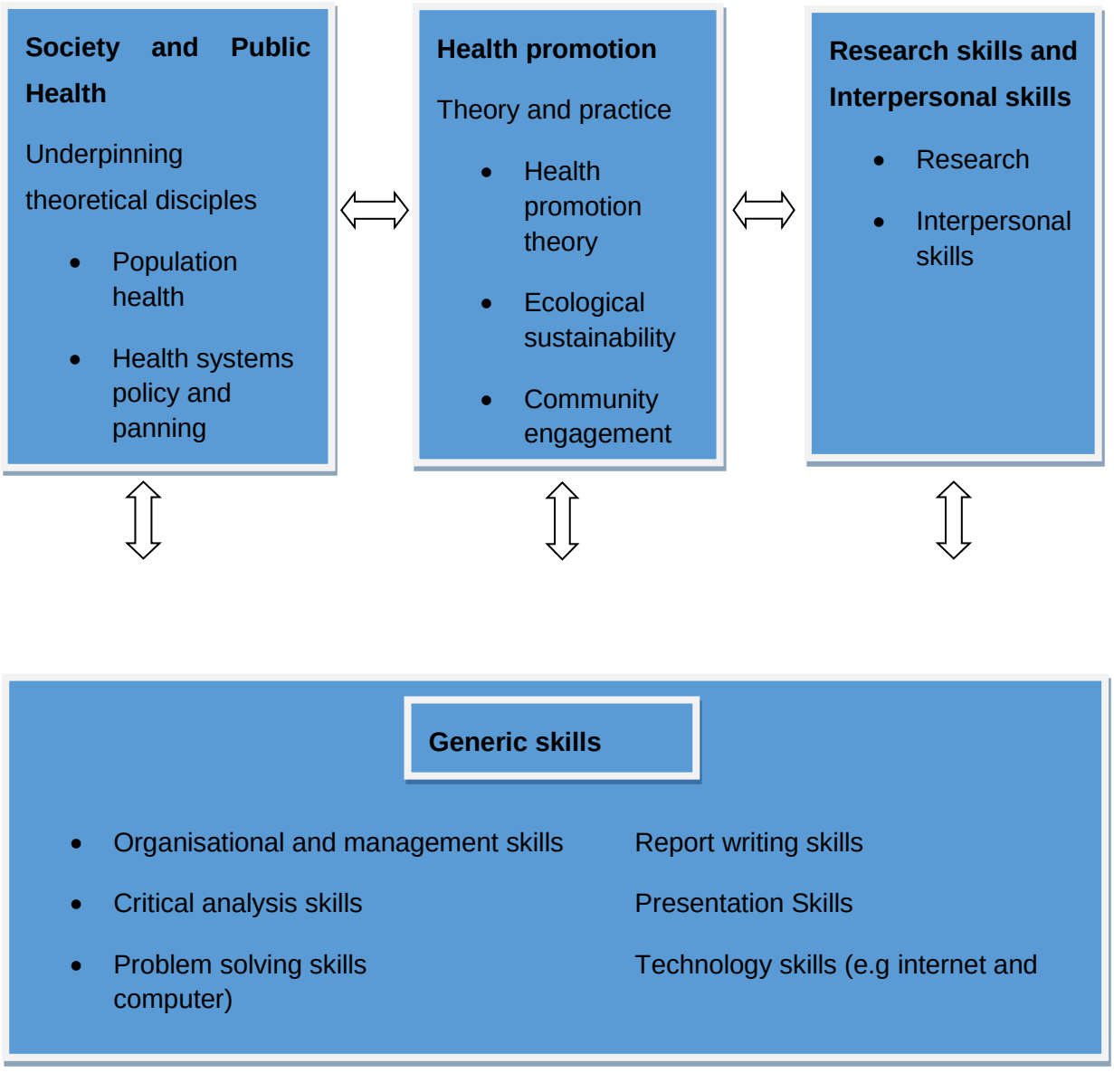
Diagnosis

According to the National Cancer Institute (2018), diagnosis is the process of identifying a disease condition, injury from its signs and symptoms. A health history, physical exam and tests such as blood tests, imaging tests and biopsies are used to make a diagnosis. In the contexts of this study, diagnosis is the process of identifying cervical cancer in woman.

1.10 Theoretical Framework of the Study

The researcher believed that cervical cancer morbidity could be reduced by the positive attitudes of nurses and accepting their roles in health promotion and prevention, there by being meta-theoretical.

Figure 1. The Pillars of Health Promotion Training and Practice



The study used the ecological model of health promotion and borrowed the works of Mc Leroy (1988). In this model, patterned behavior is the outcome of interest and behavior is viewed as being determined by the following.

(1) Intrapersonal factors-characteristics of the individual such as knowledge, attitudes, behavior, self-concept, skills, etc. This includes the developmental history of the individual/ health professional.

(2) Interpersonal processes and primary groups-formal and informal social network and social support systems, including the family, work group, and peer networks.

(3) Institutional factors-social institutions with organizational characteristics, and formal (and informal) rules and regulations for operation.

(4) Community factors- relationships among organizations, institutions, and informal networks within defined boundaries.

(5) Public policy-local, state, and national laws and policies.

An implicit assumption of these levels of analysis is that health promotion interventions are based on our beliefs, understandings, and theories of the determinants of behavior, and that these five levels of analysis reflect the range of strategies currently available for health promotion programming.

1.11 Outline of the Chapters

Chapter 1

The first chapter outlined the introduction of the study. Chapter one includes the following topics, the Statement of the problem, objectives of the study, research questions of the study, significance of the study and definition of operational terms, were operational terms are defined in the context of this study.

Chapter 2

Deals with the research design. Sampling method, techniques of data collection techniques that were used in the study. This study used in depth interviews and the Tesch's open coding method was used for data analysis.

Chapter 3

Chapter 3 deals with the presentation of data obtained from the interviewed participants about health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The data gathered in the interviews was presented, analysed and discussed in this Chapter.

Chapter 4

This chapter draws conclusions based on the research findings and literature review on health professionals' roles in cervical cancer prevention at selected gateway clinics in the three selected clinics. All the aforementioned clinics are located in the Vhembe District, Limpopo Province, South Africa. In addition, the recommendations on the strategies or intervention measures that may help to promote cervical cancer screening amongst women in the selected gateway clinics were also discussed in Chapter 4

Conclusion

The aim of the chapter was to bring background on nurses' role to cervical cancer screening in Limpopo province. The problem statement has been provided, aims, objectives, significance and theoretical framework has been highlighted. The next chapter is research methodology.

CHAPTER 2

METHODOLOGY OF THE STUDY

2.1 Introduction

The section introduces the research methodology of how the researcher conducted the study. Bless, Higson-Smith and Kagee (2013) refer to research methodology as a description of the specific techniques employed, the specific measuring instruments utilised and the specific series of activities conducted in making the measurement. The following aspects were discussed in this chapter; the research design, nature of the study, population and location of the study, sampling procedure, data collection method, data analysis and ethical considerations.

2.2 Research Design

The research design refers to the overall strategy that the researcher chooses to integrate the different components of the study in a coherent and logical way, thereby, ensuring that the research problem is effectively addressed. It constitutes the blueprint for the collection, measurement, analysis of data (Ascher, 2011). The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring that the researcher effectively address the research problem. It constitutes the blueprint for the collection, measurement, analysis of data (Ascher, 2011). To answer the research questions and to achieve the aim of the study, a qualitative exploratory research design was adopted. A qualitative explorative research approach was for this study to explore and describe the health professionals' roles in prevention of cervical cancer. The aim of qualitative research is to note real events, recording what people say with their body language and tone, observation of specific behaviour and all aspects of the world (Neuman, 2012).

Qualitative research approach is a research approach that collects information in the form of words rather than numbers (Werman, Kruger and Mitchell, 2011). Qualitative research is concerned with opinions, experiences and feelings of individuals under the study regarding a phenomenon (Hancock, 2012). Qualitative approach was used to gain in-depth information on health professionals' roles in prevention of cervical cancer at selected gateway clinics in

Vhembe District, Limpopo province; the participants will be interviewed at their workplace. The researcher recorded the information during the interview.

2.2.1 Explorative Research Design

According to Neuman (2011), exploratory research is defined as a research in which the primary purpose is to examine a little understood issue or phenomenon. According to (Polit and Beck, 2008). The aim of an exploratory design is to find facts, gather new information and to determine whether there are interesting patterns in the information. The goal of exploratory research is to explore particular phenomenon in detail (Bless and Higson-Smith, 2012). Thus, the study used exploratory research design to explore and understand health professional's roles in prevention of cervical cancer. In qualitative research the meaning of social action depends on the context in which it appears (Neuman, 2006). The context that was be studied was of nurses from the selected gateway clinics where they work.

2.2.2 Descriptive Research Design

In addition, a descriptive research design was also used to complement the explorative research design. The rationale for using both explorative and descriptive research design was for the two different research design to complement each other to produce complete valid data and finding of the study. Descriptive research aims at exploring, describing phenomenon in real life situations, discovering new meaning and determining frequencies with which something occurs (Brink, 2003 and Burns and Grove 2001). Through descriptive research design the concepts were described and relationships identified that provide the basis for further research with regards to the roles health professionals' in cervical cancer prevention. Thus, in this study professional nurses understandings, views and perceptions regarding their role in provision of health education and promotion regarding cervical cancer and prevention strategies were described.

2.3 Study Setting

Vhembe District is one of the districts in the Limpopo Province. It is situated in the far-northern side of Limpopo province and it borders Kruger National Park in the East. Vhembe has six hospitals, five being district hospitals and one being regional hospital

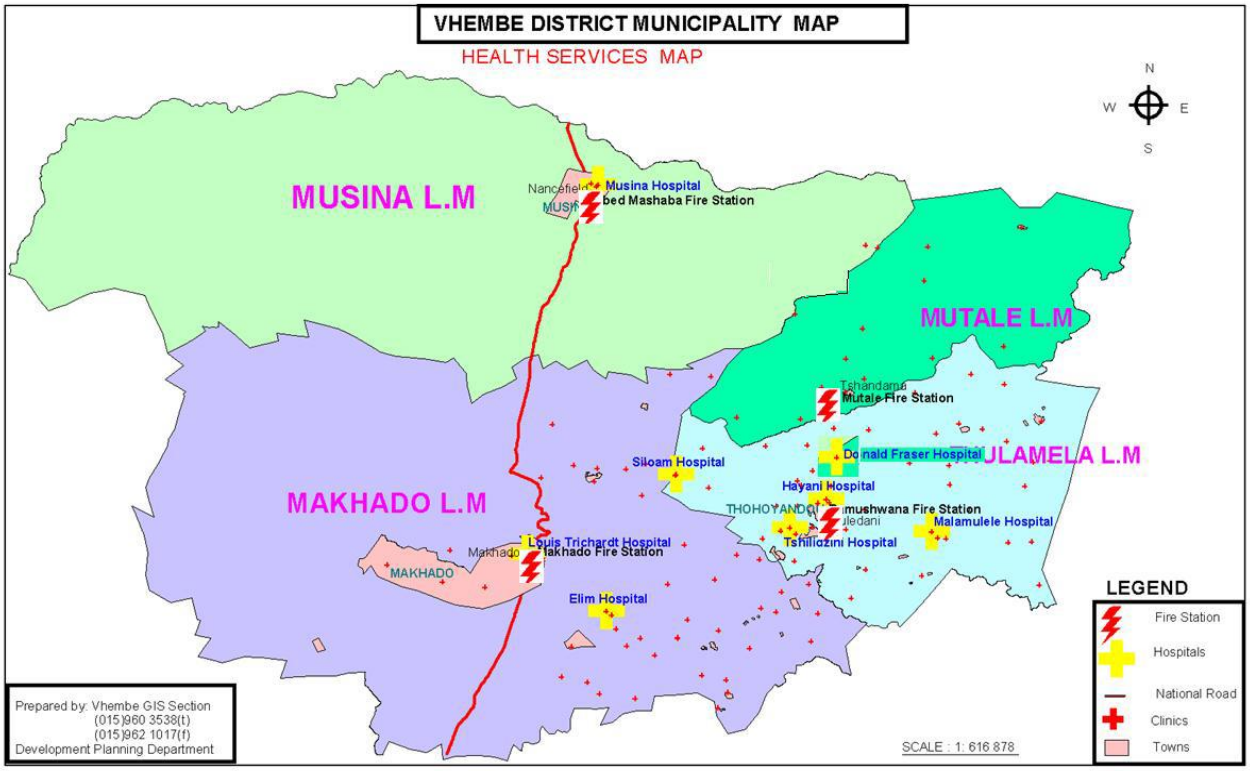


Figure 2.1 Vhembe District Map

The study was conducted at selected 3 clinics shown by Figure 3.1. Rumani Gateway Clinic (Facility A) was inside Siloam Hospital at the entrance. Vhufuli Tshitereke Gateway Clinic (Facility B) was located in Donald Fraser Hospital and Tshilidzini Gateway Clinic (Facility C) was located in Tshilidzini hospital.

2.4 Population of the study

A population is the whole group of people that is of interest to the researcher or that meet the criteria that the researcher is interested in studying (De Vos, 2011). Population refers to all inhabitants of a particular place (Litchman, 2006). Population is all professional nurses at at the 3 clinics estimated to be 30. According to the Vhembe District Department of Health, there are 10 nurses located at each of the three clinics namely; Facility B Gateway Clinic, Facility A Gateway Clinic and Facility C Gateway Clinic (DOH, 2019). Thus, the total population of the study is the sum of 30 nurses working at the three clinics. Sampling indicate the process by which the researcher chooses a sample from the population in order to get information about the reality in a way that represents the population that the researcher is interested in (Brink, Van Der Walt and Rensburg, 2012).

2.5 Sampling

2.5.1 Sampling of Clinics

Out of all the Gateway clinics in Vhembe District of Limpopo province, the researcher chose three Primary Health Care facilities. The reason for choosing the clinics it was because they are located at the gates of main hospitals in the Vhembe District, thereby offering access to professional registered nurses with knowledge about the health professional roles in cervical cancer prevention. Furthermore, the 3 clinics were ideal because of their convenience and proximity to University of Venda which is the institution that the researcher was conducting the study under.

2.5.2 Sampling of Participants

According to Burns and Grove (2010), a sample is a part or fraction of a whole, or a subset of a larger set, selected by the researcher to participate in a research study. Creswell (2009) defines a sample as a subgroup of the target population that the researcher plans to study for generalising of the target population. In addition, Bless *et al*., (2013), states that a sample refers is a small part or quantity intended to show what the whole is like. Qualitative sampling

methods make use of non-probability sampling techniques. According to Unrau, Gabor and Grinnell (2007), each unit in non-probability does not have a chance of selection and the odds of selecting a sample are unknown because the researcher does not know the population size. Non-probability, purposive sampling was used for selection of participants (Burns and Grove, 2013).

Burns and Grove (2013) states that purposive sampling can be used based on the understanding of the topic studied, certain people may have different or important perspective on the problem in question and their presence sample should be ensured. Thus, purposive sampling was used to allow the researcher to use only those professional nurses who are registered and have been working for more than two years. A purposive convenience sample technique was used to access participants of the study.

2.5.1 Criterion for Inclusion and Exclusion

- Professional registered nurses with more than 2 years of experience at the clinics.
- Male and female professional nurses.
- The criteria for exclusion in the sample for the proposed study were students doing practical training at the clinics.

2.5.2 Pilot Study

According to Akinsola (2005) the researcher should conduct a pilot study or carry out a small scale study to evaluate feasibility of conducting a full scale study. This enables the researcher to see if it is possible to carry out the study and make necessary adjustment where needed and to rectify the interview guideline of the study. The pilot study was conducted at Fondwe clinic professional registered nurses with the same characteristics to avoid influencing the behaviors of nurses at selected clinics when the full study was conducted, Fondwe clinic was purposively selected with the reason of the facility also being at Vhembe district and that also means they have same characteristics. Akinsola (2005) notes that a pilot study must be conducted on neutral participants to avoid influencing of the behaviors of the real research subjects.

2.6 Data collection

2.6.1 Preparation for interview

The researcher approached clinics manager with the ethical data clearance and a formal letter ask to ask for permission to conduct the study at clinics. After the manager's approval, the researcher made arrangements and appointment to meet participants during their free time in the clinics Boardroom. The researcher went through the information letter with each participant. The researcher gave an introduction on the research study and explained to participant the reasons for conducting the study and made them aware of the ethical considerations and gave them the consent form to sign after agreeing to participate. The researcher further requested permission from the participants to use voice recorder.

2.6.2 Interviews

The study used in depth interviews to gather data from participants. Data collection is the gathering of information relevant to the research purpose and question of the study (Burns and Grove, 2013). As a result, the researcher made use of in depth interview guideline (Appendix F) to ask questions from participants. In depth interviews determines human's life experiences through descriptions that are provided by the people involved (Brink, Van Der Walt and Rensburg, 2012). An in-depth interview guideline was used to ask questions from participants. Maree (2007) states that an in-depth interview guide helps a researcher to conduct qualitative research by interviewing a small number of individual respondents using an open-ended method to obtain detailed information about the research topic. Hence, the purpose for using an in-depth interviews guideline was to encourage the participants to speak freely, openly and to produce more-in-depth information. The central question that was asked from the participants was that, "*What role do you have regarding cervical cancer and its prevention*". Thus, the researcher used a central question to open the interview concerning health professionals 'roles in prevention of cervical cancer who are working at selected clinics in the Vhembe District of Limpopo province, South Africa.

The researcher applied facilitative communication skills during the interview by giving moral support, verbal reminders and words that can help participants to express themselves. This helped participants communicate better and they felt free to share their information. Probing

was applied since the researcher intended to get more information and explore the depth of data by making thorough inquiry during interviews regarding nurse's roles in prevention and screening of cervical cancer. The researcher reflected during interview by restating the words of the speaker. The purpose was to allow the speaker to hear their own thoughts and focus on what they say and feel and to encourage them to continue talking and show that the researcher is listening attentively. The researcher also paraphrased using different words with same meaning what the participant have said in a short sentence to obtain more information. Clarification of words in a simpler way to reach mutual understanding between the researcher and participants was done. Lastly the researcher summarised everything said in writing, focusing on important points and clustering everything under themes.

2.7 Data Analysis

Data was analysed in qualitative manner. Data analysis is the process of evaluating data which leads to, ordering, manipulating the data and describing them in a meaningful way (Brink, Van Der Walt and Rensburg, 2012). Tesch's open coding method was followed during data analysis to analyse the data that was collected (De Vos, 2011). The researcher selected one interview and read it and attached meaning to the information and wrote down thoughts and ideas that came to mind. After the researcher had completed this task for several participants, a list of all topics was made by clustering similar topics together.

Data materials belonging to each category were gathered together and analysis was performed. Taking the above in mind, the data was coded by identifying constant words, phrases and themes and identifying these passages or paragraphs for later retrieval. The researcher then observed the organization of data to check if new categories or codes emerged. The researcher found descriptive wording for the topics and convert them into categories. The aim was to reduce the total list of categories by grouping topics together that were naturally related to each other. Lines drawn between the categories indicated interrelationships of categories. A final decision was made on condensing each category. The data material belonging to each category was grouped together. The researcher recorded some of the existing data to show the relationships among categories of information. This was done in order to indicate that the answers to each question would be individually probed, pursued and examined, and analyzed using the outline as provided by Tesch (2012).

2.8. Methods to ensure trustworthiness

Trustworthiness is a method of establishing rigor in qualitative research without sacrificing relevance, Rigor assists research in preventing errors (Lincolin and Guba, 2012). Trustworthiness was being ensured by credibility, dependability, conformability and transferability.

2.8.1 Credibility

Credibility is a criterion for evaluating data quality of qualitative data, referring to confidence in the truth data (Polit and Beck, 2012). Credibility was ensured by prolonged engagement with the participants. The researcher spent sufficient time at each selected clinic with participants to understand the situation and specific aspects of the participants in depth. It built trust between the researcher and the participants. The researcher ensured that the events to be studied and setting of the study is natural and original and not changed by the researcher's presence and actions. The researcher applied persistent observation to identify the characteristics and elements in the situation at the clinics from participants targeted for this study. Member checking was used by the researcher to improve the accuracy and credibility of the study. This was achieved by returning the results after data analysis to the participants.

2.8.2. Dependability

Dependability refers to the provision of evidence such that if it were to be repeated same or similar participants in the same or similar context, its finding will be similar (Babbie, 2013). Dependability was achieved by thick description of data collection, analysis and interpretation. The research design and all the data collection techniques were outlined in this Chapter so that the study can be dependable to any researcher who may want to repeat a similar study. All the steps taken in conducting this study has been outlined, there making it dependable for current and future studies with regards to health professional roles in cervical cancer prevention in at selected gateway clinics in Vhembe District, Limpopo Province.

2.8.3. Conformability

Conformability refers to the potential for congruency of data in terms of accuracy, relevance or meaning. It is concerned with establishing whether the data represent the information provided by the participants and that the interpretation of the data are not driven by the researcher's imagination. The data must reflect the voice of the participants, and not the researcher's biases or perceptions (Brink, Van Der Walt and Rensburg, 2012).The researcher ensured conformability by not giving participants a clue of what they should answer which they do not want to say and the researcher reviewed the data collected from participants as this would have driven data into the researcher's interest and not allowed.

2.8.4 Transferability

Transferability is a criterion for evaluation of the quality of qualitative data referring to extent to which the findings from the data can be transferred to another setting or groups (Babbie, 2013). Transferability was obtained by using purposeful sampling working contextual and using dense description. The purposive sampling ensured ideal participants or professionally registered nurses with in depth knowledge about health professional roles in the prevention of cervical cancer were interviewed.

2.9 Ethical Consideration

De Vos et al., (2016) describe ethics as a set of moral principles, which are suggested by an individual, or group is subsequently widely accepted, and which offers rules and behavioral expectations about the most correct conduct towards experimental subjects or respondents.

2.9.1 Ethical Clearance

The researcher presented and submit the research proposal to the University of Venda Research Publications Committee (RPC) and ethical clearance was granted by the University of Venda Research Ethics Committee with project no SHS/19/PH/10/1604 (See Appendix

2.9.2 Permission to Conduct the Study

In this study the researcher obtained permission to conduct the study from the following authorities: Provincial department of Health, Managers from the Primary health care facilities in the district, and permission from participants to participate in this study through informed consent.

2.9.3 Informed Consent

Blanche et al, (2006) defines informed consent as a process of seeking explicit consent from subjects to participate in a research project and is based on their full understanding of the procedures involved and the likely effects. Kumar (2012) defines informed consent as ensuring that participants are made completely aware of the kinds of knowledge that the researcher wants from them and why the data is gathered, what impact it will have, how they are expected to participate in the analysis. Firstly, the researcher gave a brief introduction and the purposes of the study which was to determine health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The researcher also explained to the participant the reasons for conducting the study. After going through the informed consent form with the participant, the researcher asked the participants if they have any queries or concerns. All the queries and concerns raised about the study and the informed consent form were thoroughly answered and explained. Thereafter, they were asked to sign, thereby indicating their willingness to participate in the study. The researcher also asked permission from the participants to use an audio recorder and to write field notes. The researcher explained that the rationale for using an audio recorder to record the interview was to ensure that data is not lost and it was solely used for data analysis purposes. The informed consents were signed before the commencement of the in depth interviews.

2.9.4 Voluntary Participation

Babbie and Mouton (2011) states that participants who take part in a social research should be voluntary and no one should be forced to participate in a research project. To that end, the researcher told they have got the right to leave the study if they are no longer interested or even if they are requested to do something that they don't feel comfortable doing or something

that is not written in the informed consent. Thus, the participants voluntarily took part in the study without being coerced.

2.9.5 Privacy and Confidentiality

To ensure privacy and confidentiality the in depth interviews were done one-on-one. This ensured that the right to privacy and confidentiality of the participants were not infringed. After recording the in depth interviews, audio tape files and field notes were locked in a cabinet to ensure that only the researcher can have access to them. Therefore, information that was obtained during the research was not disclosed to anyone, thereby ensuring that privacy and confidentiality was respected and maintained.

2.9.6 Anonymity

No information including names and addresses of the participant was mentioned during publication of any information that was obtained from the interview to ensure that anonymity of participants was respected. Each participant was presented as a number or code names, to avoid disclosure of their identity. This was done to prevent harm to the participant.

2.10 Summary

This chapter has explored qualitative research techniques methods. Furthermore, the chapter has outlined in detail the population, study area setting and sampling techniques that were used in the study. It has also dealt with qualitative data collection tools namely; in-depth interviews and the data analysis method that was used. This chapter also assessed the research ethics which the researcher rigorously observed during the data collection processes and after. The next chapter provides the data analysis, interpretation and discussion of the findings of the study.

CHAPTER 3

PRESENTATION AND ANALYSIS OF DATA

3.1 Introduction

Chapter 3 deals with the presentation of data obtained from the interviewed participants about health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The data gathered in the interviews was presented, analysed and discussed in this Chapter. The chapter includes the following sections: demographic profile of participants; presentation of data, analysis of data. Firstly, the presentation of demographic information was in table form. Thereafter, data was presented, analysed, discussed and linked with relevant literature concerning health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province.

3.2 Socio-Demographic Information

Table 3.1 Socio- Demographic Information of the Participants from Facility C

Facility C Clinic

Pseudo Name	Profession	Age	Years of Service	Gender	Clinic Name
Participant 1 (Facility C)	Registered nurse	50	18 years	Female	Facility C
Participant 2 (Facility C)	Registered nurse	26	4 years	Female	Facility C
Participant 3 (Facility C)	Registered nurse	37	13 years	Female	Facility C
Participant 4 (Facility C)	Registered nurse	49	16 years	Female	Facility C

Participant 5 (Facility C)	Registered nurse	33	8 years	Female	Facility C
Participant 6 (Facility C)	Registered nurse	28	4 years	Female	Facility C
Participant 7 (Facility C)	Registered nurse	41	12 years	Male	Facility C

Table 3.1 indicates the demographic information of 7 professional registered nurses who were interviewed by the researcher with regards to health professionals' roles in cervical cancer prevention at Facility C Gateway clinic located at Donald Frazer Hospital in the Vhembe District of Limpopo province of South Africa. Out of the 7 nurses that were interviewed, 6 nurses were female whilst only one nurses was a male. The age distribution of the 7 nurses were as follows; 2 nurses were 33 and 37 years, 2 nurses were 41 and 49 years, 1 nurse was 28 years old, whilst the oldest nurse to participate in the study was 50 years old with the highest number of service as a nurse at Facility C Gateway Clinic.

Table 3.2 Socio-Demographic Information of the Participants from Facility A Gateway Clinic

Pseudo Name	Profession	Age	Years Of Service	Gender	Clinic Name
Participant 1 (Facility A)	Registered nurse	30	7 years	Female	Facility A
Participant 2 (Facility A)	Registered nurse	28	5 years	Female	Facility A
Participant 3 (Facility A)	Registered nurse	44	16 years	Female	Facility A
Participant 4 (Facility A)	Registered nurse	34	9 years	Female	Facility A
Participant 5 (Facility A)	Registered nurse	47	18 years	Female	Facility A

Participant 6 (Facility A)	Registered nurse	43	14 years	Female	Facility A
Participant 7 (Facility A)	Registered nurse	39	13 years	Male	Facility A

Table 3.2 reflects demographic information of nurses who were interviewed at Facility A Gateway Clinic that is found inside Facility A hospital. Out of the 7 professionally registered nurses who were interviewed, the youngest nurse was 28 years old, whilst, the oldest was 47 years old and had worked in the Health Department for a period of 18 years a nurse. Of the 7 nurses who participated in the study only one nurse was male, whilst the rest were female.

Table 3.3 Socio-Demographic Information of the Participants from Facility B Gateway Clinic

Pseudo Name	Profession	Age	Years Of Service	Gender	Clinic Name
Participant 1 (Facility B)	Registered nurse	52	23 years	Female	Facility B clinic
Participant 2 (Facility B)	Registered nurse	48	18 years	Female	Facility B clinic
Participant 3 (Facility B)	Registered nurse	37	12 years	Female	Facility B clinic
Participant 4 (Facility B)	Registered nurse	46	19 years	Female	Facility B clinic
Participant 5 (Facility B)	Registered nurse	33	8 years	Female	Facility B clinic
Participant 6 (Facility B)	Registered nurse	43	15 years	Female	Facility B clinic
Participant 7 (Facility B)	Registered nurse	39	12 years	Female	Facility B clinic

The third clinic that the researcher interviewed 7 nurses was Facility B Gateway Clinic that in located in Siloam hospital in Vhembe District of Limpopo province of South Africa. All the 7 participants were female nurses. The youngest nurse was 29 years old, whilst the oldest nurse was 53 years old with more than 23 years of experience playing a big role in cervical cancer prevention in clinics around Vhembe district of Limpopo province. All the 7 nurses had more than 2 years of experience in dealing and preventing cervical cancer at Facility B Gateway Clinic.

3.2 Presentation and Discussion of Findings

Themes and subthemes based on the responses of nurse with regards to health professional roles in cervical cancer prevention at health facilities are described in Figure. 1.4. A total of 4 themes emerged from the start that are; roles of nurses to cervical cancer prevention, nurses knowledge about cervical cancer, Pitfalls of cervical cancer prevention and intervention measures and strategies to improve cervical cancer screening. Out of these 4 themes came out 13 sub-themes that shall be discussed in detail in the upcoming sections. Given that 3 sub-themes namely health education, cervical cancer screening and referral of patients, each sub-theme shall be individually discussed in detail and linked with relevant literature in the upcoming section.

Figure 3.4 Summary of Themes and Sub-Themes

Number	Main Themes	Sub-Themes
Theme 1	• 3.1 Roles of Nurses to Cervical cancer Prevention	3.1.1 Health education 3.1.2 Cervical cancer screening 3.1.3 Referral of patients
Theme 2	• 3.2.Nurses knowledge about Cervical cancer	3.2.1) Nurses inadequate knowledge about cervical cancer 3.2.2 Nurses attitude towards cervical cancer screening
Theme 3	• 3.3.Pitfalls of cervical cancer screening	3.3.1 Lack of information 3.3.2 Shortage of staff and equipment 3.3.3 Religious and traditional beliefs
Theme 4	• 3.4.Intervention measures and strategies to improve cervical cancer screening	3.4.1. Increase in health education 3.4.2. Awareness campaigns 3.4.3. Vaccination programs 3.4.5. Increase of staff 3.4.6. Availability of equipment and facilities at the Clinic

THEME 1: ROLES OF NURSES TO CERVICAL CANCER PREVENTION

Nurses are at the forefront of the health care system and they act as first contact with the client in the Primary health care services. Thus their role is of paramount importance in preventive and promotive care as well as alleviating suffering. Primary health care nurses need to assess, treat and refer patients for appropriate interventions.

Sub-Theme 3. 1.1. Health Education

From the interviews conducted at Primary health care facilities, it became clear that nurses understand the different roles that they are supposed to play in preventing cancer. All the 21 professional registered nurses who participated in this study revealed that nurses play a fundamental role in primary health care including preventing diseases such as cervical cancer through providing health education, cervical cancer screening and referral of patients. The nurse's roles of health education, cervical cancer screening and referral of patients is evidenced by Participant 2 (Facility A) who articulated that:

> "As a health worker, my role is giving health education to patients that this condition is there and tell them about women who are at risk of suffering from this condition. Educating them on how early they can find out if they have the cervical cancer or not, and what to do if they see signs and symptoms. We are doing our best so far, to provide health education every day it is just that some patients do not listen. They are not interested. When we give health education in the morning they think we are delaying them but one or two will ask further in the cubicle to show that they heard us but we don't practice this daily. It is very important for us to do primary prevention because some women die because of cancer, but here we are not only focusing on cervical cancer so many other conditions that also deserves to be educated about to our elderly" .

The findings of this study are in support of Fouly Stringer and Darwish (2016) who states that the role of nurse are for two principles, as a health educator and as a provider for cervical cancer screening tests. In the first role, the nurse succeeds in health educating women about the benefits of cervical cancer screening by dismaying the stigma associated with cervical cancer screening. This health education results in the acceptance of screening for early detection of cervical cancer using visual inspection with acetic acid (VIA). Thus, nurses should demonstrate proficiency in the ability to successfully perform VIA and Pap smear screening.
All the 21 participants from the 3 clinics indicated that health education is a prominent mandate of nurses in cervical cancer prevention. Participant 2 (Facility C) said that;

> "My role as a Primary health care worker is to give health education, to all women, post-partum and old aged women and also HIV as it becomes common in those patients and also doing pap smear. In the morning sometimes before I start working I would give health education to all of them , so we don't have space to group them separately we just teach all of the patients, if a patient is coming for post-partum check-ups I also encourage her to come back for pap smear".

This shows that nurses understand that it is one of their roles to educate women about cancer screening at the clinic. Health education is very important in preventing the cervical cancer in woman because majority of women lack knowledge about cervical cancer Markovic (2005) states that irrespective of socio-economic background, women still have poor knowledge with regard to cervical cancer screening, hence they need to be educated by nurses. Unless women have access to enough knowledge about healthcare services, they will be unable to make an informed decision regarding their reproductive health. This absence of knowledge means that women are less likely to attend screening, or only attend once symptoms are present and cancer cannot be as effectively treated.

Many women do not distinguish between the various forms of cancer that affect the reproductive organs, thus they do not understand that cervical cancer can be easily prevented (Bingham et al., 2003). In a study by Busingye et al. (2012), there is a significant association shown between education level and uptake of cervical screening. Research has shown that women's knowledge about Pap smears and of cervical cancer in general is exceptionally poor (Mosavel et al., 2009). It is seen that well-educated women are more likely than less educated women to attend screening. It has been shown that in general a higher education is positively associated with the majority of health indicators (Busingye et al., 2012). Women with low literacy skills, as well as poor public health knowledge, are also at a disadvantage in accessing screening (Markovic et al., 2005).

In a study in Nigeria that ran education sessions on cervical cancer, there was an appreciated increase in knowledge for both men and women (Miller et al., 2007). This is as most men and women do not receive education around health issues. Practitioners only have a limited time during or after screening in order to educate patients on health services, which is what adds to the influences of poor screening rates (Markovic et al., 2005). In a South African study, women reported that they enjoyed attending group education sessions in which they could bring along their friends and neighbours to learn about cervical cancer (Bingham et al., 2003). Women were eager to learn about the services in order to consider being screened. Knowledge amongst women in a Cape Town community has been identified as being far from optimal (Mosavel et al., 2009). Many women view Pap smear as a process of cleaning out the

womb (Mosavel et al., 2009). They often refer to cervical cancer in non-medical terms and rarely use the term *cervix* when discussing screening.

However, Mosavel et al. (2009) indicated that some women in the community have identified that they are considering attempting to prevent illness as a primary option as opposed to waiting for illness and symptoms to occur. This shows that there are many different wrong beliefs about cervical cancer in the community, hence it is very important for nurses to educate women about cervical cancer. Therefore, the study found out that most participant acknowledged that one of the most important role of nurses is to educate women about cervical cancer to improve the number of women who go for screening for early detection.

Sub-Theme 3.1.2. Cervical Cancer Screening

All the participants of the study revealed that one of the most fundamental role of nurses is cervical cancer screening. Firstly they provide health education to woman and after they encourage them to screen for cervical cancer. This is anchored by Participant 3 (Facility C) who was quoted verbatim;

> "My role is to screen women and educate them about signs and symptoms, most women are embarrassed about those signs so I encourage them and old women to come. When the patient is in my consulting room, for all the categories, for example HIV positive women and chronic patients or post-partum. I then advise her, to say there is something called pap smear and it helps to know if you have cervical cancer or not, some immediately say they are ready then I screen them".

The quotation shows that nurses understand that one of their most important role is to screen woman of cervical cancer. The ultimate success is not only on providing health education about cervical cancer but it is in screening the women to determine whether they have cervical cancer or not. Screening for early detection and treatment is a cornerstone of secondary prevention. Early diagnosis and treatment of cervical pre-cancerous lesions prevents up to 80 % of cervical cancers in high resource countries where cervical cancer screening is routine (Sankaranarayanan, Budukh and Rajkumar, 2011). Sudenga (2013) states that a Pap smear test is the standard for early detection of cervical cancer lesions from the 1950s. Its sensitivity and specificity for CIN 2−3 is 70% to 80%, and 95% respectively.

However, for developing countries, widespread utilisation of the Pap smear test presents a number of challenges. These challenges have led to the re-introduction of VIA, which utilises

the naked eye as a screening tool, for low resource settings. Despite its limited specificity, it is economical, requires little equipment, and provides immediate results (Denny et al 2010:1561). Both the Pap smear and VIA screening are effective in detecting CIN grade 2−3, which are considered to be true precancerous lesions (Gichangi, Estambale, Bwayo, Rogo, Ojwang and Opiyo 2003:828). The use of the HPV test, on its own or in combination with VIA, has the potential to improve cervical cancer screening in low resource settings. Unfortunately it is expensive, requires infrastructure for processing, and has a long period of waiting for results. It has a higher sensitivity than VIA (90.2% vs. 41.4%), but a lower specificity (84.2% vs. 94.5%) (Sankaranarayanan 2009:1394). However, HPV testing is superior to VIA or cervical cytology because it detects a large number of high-risk sub-types of HPV. On the other hand, cervical cytology tests are excellent screening tools for pre-invasive cancer.

This indicates that rapid results for HPV testing may be suitable for performing screening and treatment in low resource setting. Furthermore, the authors state that it is preferable to use a combination of two screening tests rather than either test alone to avoid missed diagnosis. In the Western world, a diagnosis of cervical cancer is often established by biopsy and pathology reports (Denny et al 2010:1561). Symptomatic women without a visible lesion and those who have only abnormal cervical cytology undergo colposcopy with directed biopsy. If necessary, this is followed by diagnostic conisation. A screening test, followed during the same visit by treatment of women with positive results, eliminates communication difficulties regarding results and issues of non-compliance with follow up clinic visits. Cryotherapy is the most cost effective and preferred treatment for a screen-positive VIA testing in developing countries.

The prevalence of cervical cancer has been greatly reduced through successful cervical screening programmes especially in developed countries. Most developing countries are still faced with challenges of implementing such services. Success depends on a number of factors, such as coverage of the right target women, excellent follow-up service, early management of pre-cancer lesions and resource availability (Pollack, Balkin, Edouard, Cutts and Broutet, 2007:57). Research conducted in other countries among women who had cervical cancer has shown a significant relationship between age and failure to screen, older women are more likely not to screen compared to younger women. The other important factors to be considered to ensure that cervical screening contributes to prevention of invasive cancer are: diagnostic failure whereby the screening test is unable to detect precancerous lesions due to poor techniques.

The aim also is reaching a greater percentage of women who have not had a recent Pap smear. This is to diagnose undetected precancerous lesions early before the condition develops into cervical cancer (Leyden, Manos, Geiger, Weinmann, Mouchawar, Bischoff,

Yood, Gilbert and Taplin, 2005:677). There is a need to periodically review health services to ensure that all factors influencing access to these services are addressed. Studies conducted in Africa show that above 95% of health care institutions have basic infrastructures to conduct cervical screening. Most screening was provided on demand through family planning services. The most common barriers to providing cervical screening tests were a lack of a clear policy and procedures, and also staff competencies. Most smears were evaluated in tertiary hospitals and this caused delays in turnaround times of results. Therefore, the study found out that one of the most important roles of nurses is cervical cancer screen which enable the cancer to be detected early through proper screening, it is thus imperative that nurses receive proper training with regard to taking pap smears so that women can be diagnosed and treated early..

Sub-Theme 3.1.3. Referral

The study found out that one of the most important role of nurses is to refer women for further diagnosis and treatment of cervical cancer. The participants in the clinics revealed that nurse's role is to educate, screen patients and then refer them for specialist diagnosis and treatment of cervical cancer. Participant 1 (Facility C) stated that;

> "If a person complained of symptoms then I refer them to their local clinic I also refer patients to oncology nurse if results are positive for biopsy. Since there are stages of cervical cancer, if results are back and I ignore them or forget to refer patient this will affect the patient because the stage is not known at that point, if it's already at the last stage then the patient will be sick at home so referring is important to get patient helped earlier. (I am not sure but I think there are three or four stages of cervical cancer".

Quotation from Participant 1 (Facility C) shows that nurses at the 3 clinics play a very important role in referring patients for specialist screening and treatment of women who test positive for cervical cancer. They also help in following up with the specialist to ensure that the test results are out and that the patients receives the treatment that they should get depending with the stage of the cervical cancer. Department of Health National Guidelines on cervical cancer (2000), women with abnormal cervical smear results require referral for colposcopy and for further treatment. It is thus important for nurses to have knowledge of the different stages of cancer, and also be able to interpret findings from cytology results and refer the client well in time for further treatment. The South African National Department of Health proposed a total of 3 cervical cancer smears per lifetime beginning at age 30 and above and also that these are spaced at 10 year intervals. The premise behind this policy is that cervical cancer develops

over time; it may take 10-20 years for a pre-cancer lesion to progress to cervical cancer. Younger women under 30 years usually present with low grade lesions that regress to normal over time. The mean age of patients with high-grade lesions is 30 years and the time estimated for progression to invasive cancer is 10 years. If a cervical cancer smear is sensitive enough it should be able to diagnose cervical abnormality early enough so as to facilitate preventive measures. Therefore, the study found out that one of the most important roles of nurses is to follow up and refer patients for specialist screening and treatment for cancer.

THEME 2: NURSES KNOWLEDGE ABOUT CERVICAL CANCER

Knowledge is key in every aspect, knowledge also translate to competency and efficiency in the provision of nursing care. Primary health care nurses should have knowledge of communicable as well as non-communicable diseases in order to treat and prevent the progression of disease morbidities.

Sub- theme 3.2.1. Nurses inadequate knowledge about cervical cancer

Majority of participants from the 3 clinics shows that they have knowledge about cervical cancer as indicated by how they defined cervical cancer. This is evidenced by Participant 1 (Facility A) who said that;

> "Cervical cancer is when the cervix is inflamed, the inflammation continues and progress then it becomes cancerous or malignant. The lower part of the cervix is the one mainly affected so the abnormal cells starts growing, and there are four stages of this cancer so before we say it's cancerous there would have been stages passed".

The response by Participant 1(Facility A) shows that the nurses have knowledge about cervical cancer and they do cervical cancer screening at the clinics. However, the nurses seem to possess basic knowledge about cervical cancer. The way they answered the question or defined cervical question was to a lesser extent average and not excellent. Some were not even sure of the definition of cervical cancer and their answer was based on assumptions and not on expertise. This is evidenced Participant 2 (Facility B) who said that;

> "I don't know what to say exactly but it's a cancer of the cervix. I have been trained long time ago in my nursing training, but I don't understand it in a way I can tell someone, all I am aware of is that like other cancers there is no cure for it but they can treat it if its early enough and no

damage have been done to the uterus otherwise they will remove the whole uterus if it's already damaged".

This shows that Participant 2 (Facility B) had basic or average knowledge about cervical cancer which is a bit unfortunate given that nurses must be experts or know all the information about cervical cancer despite having been trained in a long time. The findings of this study concurs with a study by Udigwe (2013) in Nigeria, which revealed that nurses had an average knowledge about cervical cancer screening. They were not aware of the routine screening guidelines and had limited understanding of different types of cervical cancer screening techniques. Therefore, this shows that nurses need to be educated more about cervical cancer. Goyal, Vaishnav and Shrivastava (2013) study revealed that although nurses identify certain aspects of cervical cancer, their knowledge is not complete.

A nursing personnel should have a better knowledge of preventable diseases like cervical cancer (Mutyaba, Mmiro, Weiderpass, 2013). A study conducted by Gabriel (2015) revealed that little over half 61% of nurses had knowledge of cervical cancer but only 22 % reported practicing prevention of cervical cancer. Mutyaba, Mmiro and Weiderpass (2013) notes that the lack of depth on knowledge of cervical cancer in staff nurses can be explained by their training curriculum. According to a study by Chirenje, Chipato and Kasule (2013), only 47% participants obtained knowledge of cervical screening from their curriculum book. Until recently, cervical cancer prevention issue has been the concern of physicians. Therefore, this means that there is an urgent need to integrate cervical cancer prevention issues in the nurses' training curriculum.

Data from different studies and results suggest that levels of knowledge and understanding of cervical cancer as well as its preventable nature should be improved. Continuing nurse education may contribute to strengthen cervical cancer screening programs. Nursing staff, if properly aware of this disease, can educate the masses and hence increase health-seeking behaviour in women (Shah, 2012). Lack of knowledge about cervical cancer in the population among nurses and other health care workers is a prime barrier for access to cervical cancer prevention (Argutol and Bishop, 2004). Most nurses do not know the aetiology of the cervical cancer disease. Cervical carcinoma is a condition that develops at the border of the cervix and the uterus.

The major risk factor for the development of pre-invasive or invasive cervical carcinoma is infection with the HPV, which is transmitted sexually (Kimani et al., 2012). The HPV can be detected in 99.7% of cervical cancers and is extremely common. Over 50.0% of sexually active

women acquire the virus by 50 years of age (Leslea, Donna, Donna and Rachel 2013). Different types of HPV are identified as precursors to cervical cancer (Bain, Burton and Mcgavigan, 2011). Therefore, this means that there is an urgent need to integrate cervical cancer prevention issues in the nurses' training curriculum. Consequently, the study found out that although nurses at Facility C Facility C Gateway Clinic, Facility AGateway Clinic and Facility B Gateway clinic have knowledge about cervical cancer, their knowledge is limited and average. Therefore, there is need for more training at the clinics to increase the knowledge of nurses about cancer

Sub-Theme 3.2.2. Attitude of Nurses towards Cervical Cancer Screening

Majority of the participants who took part in the study revealed that they do not have any negative attitude towards cervical cancer screening. The participants revealed that sometimes the conditions that they work in makes it look like they have a negative attitude towards cervical cancer screening whilst they do not. The main reason being that they know that their primary role is health education and cervical cancer screening and they do their best to uphold their mandate. This is evidenced by Participant 6 (Facility A) who said that;

> "Usually people believe that nurses have a negative attitude towards patients but I think it's a bit unfair because remember we are human, so sometime we react, not because it's the right thing to do but we are humans. So it happens sometimes but generally I believe that we have a good attitude towards our patient because we know our job is to help people and prevent cervical cancer".

This shows that nurses do not have a negative attitude towards cervical cancer screening but they are very positive about educating and screen women. Therefore, out of 21 nurses interviewed from Facility C Facility C Gateway Clinic, Facility AGateway Clinic and Facility B Gateway clinic, the majority indicated that they do not have negative attitude towards cervical cancer screening of women but it is the conditions that they work in that portrays as if they have a negative attitude towards screening. However, to a lesser extent Participant 5 (Facility A) pointed out that;

> "To be honest with you, sometimes we do have a negative attitude towards our patients and cervical cancer screening. May be it's because of the conditions and pressures that we work under".

This shows that to a lesser extent the conditions that nurses work in makes them to react but it is not because they have negative attitude towards cervical cancer screening because they know the importance of screen and also the fact that it is their duty to educate and screen women for cervical cancer. The findings of this study are in support of Nakalevu (2012), who pointed out that inaccessible and unavailability of high-quality health services an unfriendly health workers leads to low cervical cancer screening of women. Nakalevu (2012) strongly argue that other factors like knowledge, attitude of both women and health workers may act as a barrier of cervical cancer screening. Therefore, the study found out that majority of the nurses who participate in this study do not have negative attitude towards screening but it is only the conditions of working that may be difficult sometimes but that doesn't mean that they have a negative attitude towards cervical cancer screening.

THEME 3: PITFALLS CERVICAL CANCER SCREENINGS

The participants of the study revealed the importance of cervical cancer screening especially in early detection. However, there are a lot of pitfalls that are associated with cervical cancer screenings. As a result, the participants of the study revealed the pitfalls that prevents them to conduct cervical cancer screenings at their respective clinics. Thus, from their responses with regards to pitfalls of cervical cancer screenings, the following sub-themes emerged; lack of information, shortage of staff and equipment, religious and traditional beliefs.

Sub-Theme 3.3.1. Lack of Information

The participants of the study revealed that there is lack of knowledge or information about cervical cancer which makes women to be reluctant to be screen for cervical cancer. Even when the nurses educated them about the screening some women still refuse to be screened pointing out excuses such as being ashamed or feeling uncomfortable to be screened and fear of being hurt by the screening process. Participant 1 (Facility B) said that:

> "Patients always complain and say speculums give them vaginal infections or hurt them therefore they won't participate at all by hearing others say so, others say cancer is a disease for white people and black cannot have it. You don't know these patients, once a patient starts saying all those things it becomes even harder to convince them that it's a myth and not facts so we just try and educate more".

This shows that women lack information or the right knowledge about cervical cancer that is the reason why they do not want to be screened. Nurses do their best to dissemination information and teach about cervical cancer but as much as they can try, at the end of the day it is up to the individual to choose to screen or not. The findings of this study are in support of Markovic (2005) assertion that women viewed the process of cervical cancer screening as highly embarrassing which deters them from attending screening. In addition to embarrassment many women have a fear around the actual process of a Pap smear, believing the screening will be painful (Businge, 2012). Women have been reported to hold powerful and fearsome images of cancer.

Women have used words like “plague” or “eating” or “rotting of the womb” when referring to the womb and cancer (Bingham, 2003). A study in Uganda by Busingye et al. (2012) showed that many women thought that, while screening for pre-invasive cervical cancer, they would be screened for HIV, and they did not want to know their HIV status. The fear of a positive screen for pre-invasive cervical cancer and thinking that knowledge of diagnosis would result in an early death prevented women from attending screening. Many women had an overwhelming sense of anxiety and fear should they receive a positive result from the Pap smear screening (Chigbu and Aniebue, 2012). This was due to the fact that a positive cervical screening result could carry with it the implication that a woman had been promiscuous (Bingham., 2003). Therefore, this study found out lack of knowledge makes woman to be reluctant to go for cervical cancer treatment in the 3 clinics namely; Facility C Facility C Gateway Clinic, Facility AGateway Clinic and Facility B Gateway clinic.

Sub-Theme 3.3.2. Shortage of Staff and Equipment

The shortage of staff and equipment was cited as one of the leading pitfall that makes women not to be tested for cervical cancer screening in the clinics. Participants revealed that is always overwhelmed with patients who come to consult and as a result there are few nurses to cope with the demand of the primary care need. This compromises the amount of time they spent on health education and screening of cervical cancer. This is evidenced by Participant 3 (Facility C who articulated that:

> “People trained to screen are few, oncology nurse is only one here at the hospital so this takes time for results to be reviewed. Sometimes we screen and results are not back for almost three to six weeks then patients come back to check results and not find them and they give up. We don’t do campaigns anymore due to shortage of staff, even mobile testing is no longer possible

> .Patients especially women are always in a hurry if they come and it's full they will go and never come back. Elderly patients also think we will tell other people about their private parts".

This shows that there is indeed shortage of staff and equipment. It is unfortunate that a clinic can have one oncology nurse and results take longer to be processed and released. The same sentiments were shared by Participant 4 (Facility B) who said that:

> "We don't have privacy, this type of cubicle does not have screening curtains and the door doesn't lock, women like privacy and during the procedure other colleagues can open any time and the woman will be naked and uncomfortable. We use to screen in a dressing room before they changed it to an office. Lately we don't really screen unless it's a high risk patient. Other challenges include shortage of vaginal speculum. We just sacrifice and use the same cubicle as you can see there is no space here, the bed is very uncomfortable for both the nurse and patient but we sacrifice for the sake of the patient but the screening number is very low). The quotations shows that the clinics have poor facilities and shortage of equipment which in turn makes women to be unwilling to screen".

The findings of this study supports an assertion by Agurto (2004) that the health service system is one barrier to cervical screening which influence woman's decision not to adhere to screening practices for cervical cancer. With regard to the actual screening service, women often face barriers of poor quality service, lack of accessibility, privacy and cost of service, as well as having a long waiting time for service access (Mosavel, 2009). As a result of all these poor services they chose not to undergo cervical cancer screening. Therefore, the study found out that shortage of staff and equipment is a pitfall for cervical cancer screening at the 3 Gateways clinics

Sub-Theme 3.3.3. Religious and Cultural Beliefs

All the participants of the study revealed that a plethora of religious and cultural beliefs acts as a pitfall for cervical cancer screening in the 3 clinics. Regardless of health education provision by the nurses to women, religious and cultural beliefs makes them to be reluctant to screen for cervical cancer. Participant 2 (Facility A) was quoted verbatim;

> "Sometimes we do not have vaginal speculums, some patients are interested at that time and we end up not screening them. Some patients are uncomfortable with undressing for nurses due to their religious beliefs and so on. Here we also see Muslim patients, and if there is a male nurse, it would not happen at all, so rather give her to a female nurse, it's a challenge because sometimes from what she is explaining you can hear that this person must be done pap smear

> but it takes time to convince them to take off their clothes and we can't force them so if she refuses nothing can be done really".

Excerpts from Participant 2 (Facility A) shows that religious and cultural beliefs is a pitfall to cervical cancer screening. At the end of the day the nurses cannot force women to go for screening. The best they could do it will be to provide them with health education. The same sentiments were echoed by Participant 1 (Facility C) who revealed that;

> "Old aged patients are not comfortable with speculum being used on their vagina. When it comes to institution it is shortage of staff if we don't have time and we are few we don't do it daily. Yes, old aged patients are too cultural, they don't understand why we have to use speculum inside their vagina so sometimes she would agree but when it's time to do the procedure she just refuse to continue". This shows that it is very hard to convince a cultural lady to screen for cervical cancer".

The findings of this study supports an assertion by Mosavel (2009) who postulate that cultural beliefs around cervical cancer and pre-invasive cervical cancer contribute to poor adherence to screening as they influence people's decision-making practices. If treatment was different to any experiences from a woman's cultural practices, then it would not be adhered to (Baldwin, 1996). Among low income African groups, it is usually the whole family that is involved with decision making (Baldwin, 1996). In addition to the family decision-making practices in African culture, traditionally women occupy a subordinate position (Heunis, 2012). Therefore, the study found out that religious and cultural beliefs acts as a pitfall of cervical cancer screening at the 3 Gateway clinics.

THEME 4 STRATEGIES TO IMPROVE CERVICAL CANCER SCREENING

Most participants revealed a plethora of intervention measures and strategies that may help cervical cancer screening in the clinics. The strategies that were pointed out by participants involves the following; increase health education, awareness campaigns, vaccination programs, increase of staff, availability of equipment and facilities at the clinic. These strategies shall be discussed in detail and linked with relevant literature in the upcoming section.

Sub-Theme 3.4.1. Increase of Health Education

The participants of the study revealed that one of the most cited strategy was increasing health education and awareness about the importance of careening in the clinics and community around. Participant 4 (Facility B) said that;

> "We prevent by screening and health talk about signs and symptoms of cervical cancer. Maybe once a week or twice in the morning as we will be also telling patients about other conditions especially this days since corona virus is the main topic".

This shows that nurses should continue and increase more health education to the women and communities around the clinic to encourage women for cervical cancer screening. The findings about this study are in support of Fouly Stringer and Darwish (2016) who notes that one of the roles of nurses is to provide health education. Health educates women about the benefits of screening for cervical cancer by discouraging the stigma associated with screening for cervical cancer. Therefore, the study found out there is a need to continue promoting health education to debunk myths about cervical cancer and to encourage more women to go for cervical cancer screening.

Sub-Theme 3.4.2. Awareness Campaigns

The participants of the study revealed that in order to encourage cervical cancer screening there is a need for awareness campaigns using all media platforms and social network to reach out to many women. The use of social media is very relevant given that social media has become more popular than ever before the period of corona virus. Participant 1 (Facility C) said that;

> "Social media like radio health education about cervical cancer must be done , they must also ask old aged patients to come, we must also go to schools and give health education and also royal house ,if there can be pamphlets also to give patient to read at home it can help them understand".

This shows that awareness campaigns must be done at clinics and in the community involving and targeting all women in the community using all the available platforms such as social media, radio and posters. Participant 4 (Facility A) pointed out that;

> "Pamphlets can help people when they are typed in different languages .and also radio programs".

This shows that the awareness campaigns can would reach all women and language would not be a barrier since the pamphlets would be printed in African languages that even old women can understand such as Tshivenda.

Sub-Theme 3.4.3. Vaccination Programs

Participants pointed out that there is a need for cervical cancer vaccination programs that target the young people before they become sexual active or when they will be in their early years of being sexually active. Participant 2 (Facility A) articulated that,

> "We give health education. There is also a program of vaccinating young girls at schools, even though our clinic is not part of it, we tell their parents about Human Papilloma Virus vaccine for 9 years old girls at school. For example giving of vaccination to young girls at schools we are supposed to go there but sometimes it's impossible so we request parents to bring them to clinic if the vaccine is available".

Quotation from Participant 2 (Facility A) shows that vaccination of young girls before and in the early stages of being sexually activity is a very good strategy of preventing cervical cancer. Prevention is always better than curing. Shah (2009) states that vaccination is one of the most commonly used public health strategies to reduce the risk of infection and minimize the prevalence of the disease-causing agent (HPV) in the environment. Since HPV infection often occurs shortly after the onset of sexual activity (over 35 % of women are infected within 2 years of initiating sexual activity, vaccination campaigns should target 9–13 year old youth, prior to sexual debut (Kjaer, Chackerian, van den Brule et al., 2012). The vaccines are over 95 % effective at preventing HPV infection caused by vaccine-type HPV when the full three course dose is given over six months (Garland, Hernandez-Avila, Wheeler et al., 2007). Since 2014, the WHO recommends a two-dose regimen for girls and boys aged 9–13 (quadrivalent vaccine) or aged 9–14 (bivalent vaccine) , which is not yet licensed in all countries, but reduces the follow-up burden while maintaining strong protective which equals to coverage (Dobson, McNeil , Dionne , Dawar et al., 2013).

The WHO recommends the inclusion of HPV vaccination in national immunization programs provided HPV represents a public health priority and vaccine delivery is feasible and cost-effective (WHO, 2014). Unfortunately, HPV vaccination is not yet available in many African countries. By August 2014, only 58 countries had introduced HPV vaccination for girls into their national immunization program (WHO, 2014). While the majority of these are high-resource countries, a few low to middle income countries in Africa including Rwanda, South

Africa, Lesotho, and Uganda have also introduced national HPV vaccines (Cervical Cancer Action, 2014). In 2013, the Global Alliance for Vaccines and Immunizations (GAVI) began providing support for HPV vaccinations to eligible countries and will support demonstration projects in 23 countries, of which ten have been launched, primarily in sub-Saharan Africa (Cagney, 2013). However, barriers to vaccination for example concerns about the safety of the vaccine, provider reservations about recommending vaccination for younger girls, limited awareness of the relationship between HPV and cervical cancer, and varied parental acceptance of the HPV vaccine result in inconsistent vaccine uptake, globally (Ladner , Besson , Hampshire et al., 2012). Therefore, the study found out that vaccination programs target young girls and women are one of the best strategies prevent the prevalence of cervical cancer.

Sub-Theme 3.4.4. Increase of Staff and Provision of Better Facilities

The participants revealed that there is a need to increase staff in the clinics and the provision of better facilities and equipment for cervical cancer screening. Participant 4 (Facility C) said that;

> "Giving health education daily and planning awareness day but it's not easy due to shortage of staff so I would like them to hire more staff and also help us with renovations on this clinic to provide more space to screen patients every day. Maybe if we could try and improve giving health education daily in the morning before we start working and at least one patient screened by each of us daily that could work".

The quotation from Participant 4 (Facility C) shows that staff shortage is indeed a big problem and lack of facilities to cervical cancer screen at the clinics. Therefore, there is a need for more nurses at the three clinics to encourage women for cervical cancer screening and for health education of patients.

3.3 Summary

The data obtained from 21 interviewed nurses from 3 clinics about exploring health professionals' roles in cervical cancer prevention at selected gateway clinics was presented, analysed, discussed and linked with relevant literature. Firstly, demographic information of the participates from the clinics were presented in Table form.Thereafter, the data from interview was presented. The presentation involved reflecting on participants inputs on the research questions the study seek to answer. Thereafter, the data was analysed to explain and interpret it to find meaning in relation to the health professionals' roles in cervical cancer prevention at

selected gateway clinics. The study found out that all the 21 nurses who participated in the study had knowledge about cervical cancer and its preventive measures. However, their knowledge was limited and basic even they know the practical aspect of screening women for cervical cancer. The study found out that the nurses from the 3 clinics know that the major role of a health professional is health education to women about cervical cancer, screening of cervical cancer, follow up and referring patients to cervical cancer specialist for further diagnosis and treatment. Despite, the nurses knowing their roles and discharging them, there are a plethora of pitfalls that impacts negatively on cervical cancer screening.

The pitfalls to cervical cancer screenings comprises of the following; lack of information and knowledge by woman, shortage of staff and equipment and religious and culture beliefs. The majority of the nurses indicated that they do not have negative attitudes towards cervical cancer screening because they know that it is their primary mandate and they should educate and screen woman for cancer. However, to a lesser extent the pitfalls that are associated with cervical cancer screening such as shortage of staff and equipment makes them look like they have a negative attitude towards screening whilst they will be working on unfavourable conditions. Thus, the participants propose a plethora of strategies to improve cervical cancer screening which comprises of the following; increase of health education, awareness campaigns, vaccination programs and increase of staff, equipment and facilities to screen cervical cancer at the three Gateway clinics.

CHAPTER 4

CONCLUSION AND RECOMMENDATIONS

4.1 Introduction

This chapter draws conclusions based on the research findings and literature review on health professionals' roles in cervical cancer prevention at 3 selected gateway clinics. All the 3 gateway clinics are located in the Vhembe District, Limpopo Province, South Africa. In addition, the recommendations on the strategies or intervention measures that may help to promote cervical cancer screening amongst women in the selected gateway clinics. Firstly, the overview of the study shall be presented to get a glimpse of where the study was coming from.

4.2 Overview of the Study

The purpose of this study was to determine health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The study was guided by three objectives. The first objective of the study was to explore health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The second objective was to determine the knowledge and attitude of health professional towards cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The last but not the least objective was to come up with intervention measures or strategies that may help to promote cervical cancer screening amongst women in selected gateway clinics. Chapter one indicated the nature of the research problem, aims and objectives of the study, the research questions, definition of concepts and the significance of the study. Literature review was reviewed in Chapter two and the theoretical framework of the study was meta-theoretical based on the ecological model of health promotion borrowed from the works of Mc Leroy (1988). In chapter 3, the methodology of the study was discussed in detail. The study used a descriptive and exploratory qualitative research design. Thus, purposive sampling was used to allow the researcher to use only those nurses who are registered and have been working for more than two years. A purposive convenience sample of 21 registered nurses drawn from 3 gateway clinics namely; Facility C Facility C Gateway Clinic, Facility AGateway Clinic and Facility B Gateway clinic was chosen. The researcher drew 7 nurses from each clinic to make a total of 21 professional registered

nurses who participated in the study. The data collection method was interviews and the Tesch's open coding method was used for data analysis. Data presentation, analysis and discussion was done in Chapter four. Chapter five shall present the conclusion drawn from the research basing on the literature review and the findings of the study. Recommendations would also be made in this chapter. Firstly, the overview of the findings are presented in the upcoming section.

4.3 Overview of the Findings

THEME 1: ROLES OF NURSES TO CERVICAL CANCER PREVENTION

The role of the nurses was the major theme that emerged from the study. Out of this theme emerged other sub-themes namely; health education, cervical cancer screening and referral of patients The participants of the study revealed that nnurses are at the forefront of the health care system and they act as first contact with the client in the Primary health care services. Thus their role is of paramount importance in preventive and promotive care as well as alleviating suffering. Primary health care nurses need to assess, treat and refer patients for appropriate interventions.

THEME 2: NURSES KNOWLEDGE ABOUT CERVICAL CANCER

The second major theme to emerge in the study was nurse's knowledge about cervical cancer. Two sub-themes emerged from this main themes that involve; nurses inadequate knowledge about cervical cancer and nurse's attitude towards cervical cancer screening. Knowledge is key in every aspect, knowledge also translate to competency and efficiency in the provision of nursing care. Primary health care nurses should have knowledge of communicable as well as non-communicable diseases in order to treat and prevent the progression of disease morbidities.

THEME 3: PITFALLS CERVICAL CANCER SCREENINGS

The participants of the study revealed the importance of cervical cancer screening especially in early detection. However, there are a lot of pitfalls that are associated with cervical cancer screenings. As a result, the participants of the study revealed the pitfalls that prevents them to conduct cervical cancer screenings at their respective clinics. Thus, from their responses with regards to pitfalls of cervical cancer screenings, the following sub-themes emerged; lack of information, shortage of staff and equipment, religious and traditional beliefs.

THEME 4: STRATEGIES TO IMPROVE CERVICAL CANCER SCREENING

Most participants revealed a plethora of intervention measures and strategies that may help cervical cancer screening in the clinics. The strategies that were pointed out by participants involves the following; increase health education, awareness campaigns, vaccination programs, increase of staff, availability of equipment and facilities at the clinic. These strategies shall be discussed in detail and linked with relevant literature in the upcoming section.

4.3 Application of the Theoretical Framework into the Findings

The theoretical framework of this study was based on the Ecological model health promotion and borrowed from the works of Mc Leroy (1988). Application of the model to the context of this study shows that intrapersonal factors-characteristics of the individual such as knowledge and attitudes has a bearing on nurses roles in cervical cancer prevention at selected 3 gateway clinics in Vhembe District, Limpopo Province. When nurses educate women about the dangers of not being screened, women perceive their susceptibility to cervical cancer and perceive the threat of cervical cancer to their health. They perceive the threat that cervical cancer and the also perceive their susceptibility if they do not go for regular screening for early diagnosis in the event that they have cervical cancer. Thus, the findings of study can be anchored in perceived susceptibility and perceived threat as postulated by the Ecological model of health promotion. The nurses know that they are at the forefront of the health care system and they act as first contact with the client in the Primary health care services. Thus their role is of vital importance in preventing cervical cancer and promoting screening amongst

women and promotive care as well as alleviating suffering. In order to promote cervical cancer screenings, the findings of the study reveals that the nurses educate women about cervical cancer screening in groups usually during the morning. According to Ecological Model of Health both formal and informal groups plays a very important role in health promotion. This evidences that the findings of the study are anchored by the Ecological Health Model of Health. Thus after all has been done and said, health promotion interventions are based on nurses beliefs, understandings, and theories of the determinants of behavior, and this reflect the range of strategies that may be used health promotion programming of encouraging women to undergo cervical cancer screening for early detection.

4.4 Recommendations of the Study

The recommendations in this study are based on the findings of the study This study recommends a plethora of intervention measures and strategies which may help to cervical cancer screenings at the 3 clinics namely; Facility C Facility C Gateway Clinic, Facility AGateway Clinic and Facility B Gateway clinic and the whole Vhembe District of Limpopo province of South Africa and beyond;

- Nurses should be adequately trained for providing cervical cancer screening services at the WHO recommended intervals and the methods used.

- Nurses have a large role to play in informing the general public and promoting preventive practices. If not, wrong or inconsistent information could be shared.

- Provide reference materials and providers who can mentor the other nurses on cervical cancer screening activities so that they can become confident service providers.

- Review and strengthen cervical cancer screening content in the nursing training colleges' curricula so that all students graduate as providers.

- The Clinics or Department of Health must conduct more awareness campaigns to spread knowledge about the importance of cervical cancer screening

- There is need for more nurses at the 3 clinics to prevent staff shortage. More personnel will enable some nurses to focus on health education about cervical cancers screening rather than focusing on treating ailments only.

- There is need for construction of better cervical cancer screening facilities and equipment so that women can feel comfortable during the processes.

- There is a need to promote cervical cancer vaccination programmes in clinics, schools and communities so that cervical cancer can be prevented young people before they become sexual active or when they will be in their early years of being sexually active.

4.5 Study Limitations

A plethora of limitations were encountered in carrying out the study. The setting of appointments with participants was a challenge. Some participants cancelled appointments and some would arrive late for the interviews because of their busy schedule. However, the researcher would re-schedule in the unfortunate incidences of participants counselling or not showing up for the interviews. Other than that there was no other challenges that were encountered in conducting the study.

4.6 Conclusion

The purpose of this study was to determine health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province. The study found out that all the 21 nurses who participated in the study had knowledge about cervical cancer and its preventive measures. However, their knowledge was limited and basic even they know the practical aspect of screening women for cervical cancer. The study found out that the roles of nurses involves the following, health education to women about cervical cancer, screening of cervical cancer, follow up and referring patients to cervical cancer specialist for further diagnosis and treatment. Despite, the nurses knowing their roles and discharging them, there are a plethora of pitfalls that impacts negatively on cervical cancer screening. The pitfalls to cervical cancer screenings comprises of the following; lack of information and knowledge by woman, shortage of staff and equipment and religious and culture beliefs. The majority of the

nurses indicated that they do not have negative attitudes towards cervical cancer screening because they know that it is their primary mandate and they should educate and screen woman for cancer. However, to a lesser extent the pitfalls that are associated with cervical cancer screening such as shortage of staff and equipment makes them look like they have a negative attitude towards screening whilst they will be working on unfavourable conditions. Thus, the participants propose a plethora of strategies to improve cervical cancer screening which comprises of the following; increase of health education, awareness campaigns, vaccination programs and increase of staff, equipment and facilities to screen cervical cancer at the three selected clinics.

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Appendix A : Ethical Clearance

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Ms VJ Mukwevho

Student No:
11621301

PROJECT TITLE: **Exploring health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province.**

PROJECT NO: **SHS/19/PH/10/1604**

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof DU Ramathuba	University of Venda	Supervisor
Ms AG Mudau	University of Venda	Co -Supervisor
Ms VJ Mukwevho	University of Venda	Investigator – Student

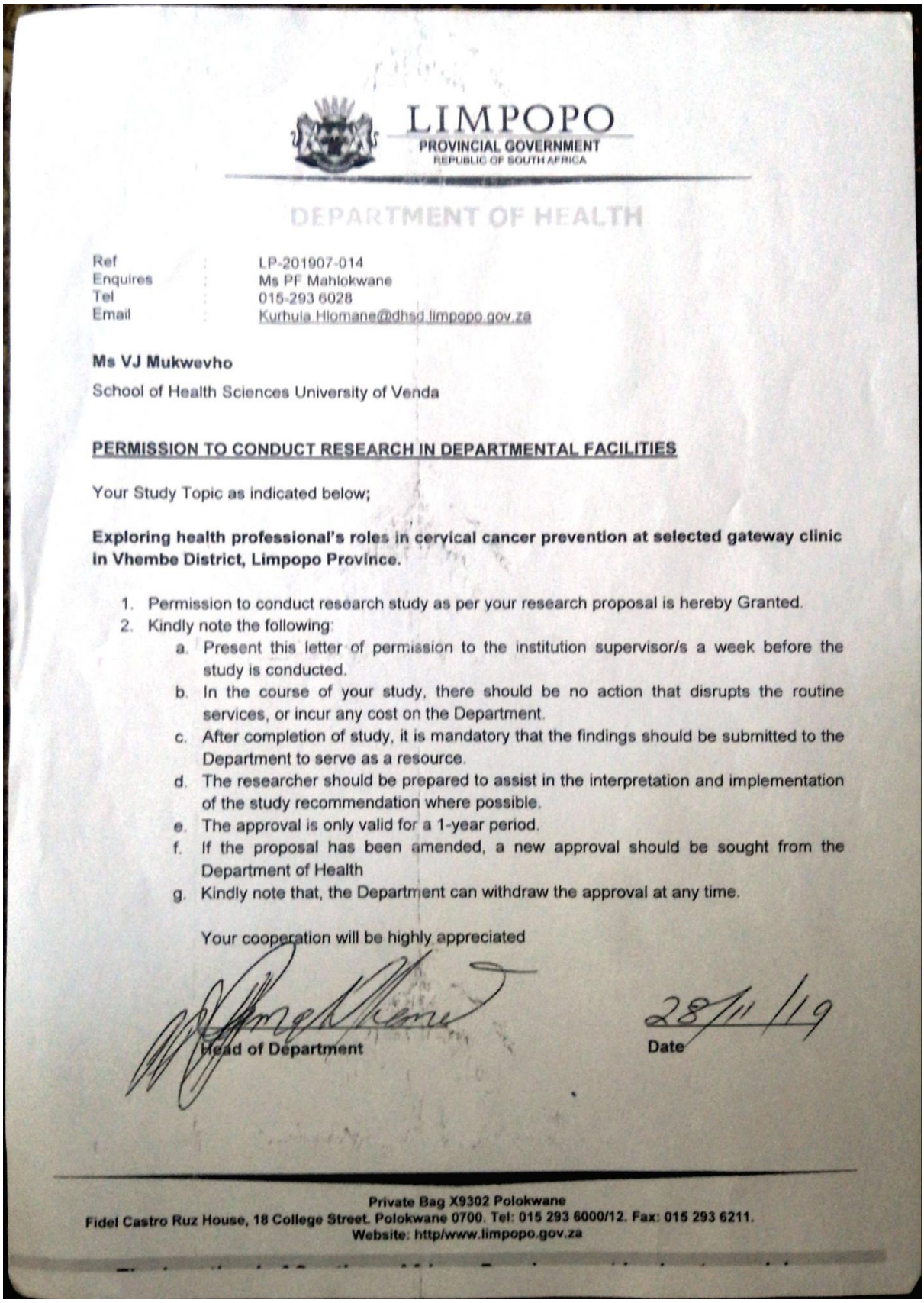
ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: April 2019
Decision by Ethical Clearance Committee Granted
Signature of Chairperson of the Committee: .....
Name of the Chairperson of the Committee: Senior Prof. G.E. Ekosse

UNIVERSITY OF VENDA
DIRECTOR
RESEARCH AND INNOVATION
2019 -04- 17
Private Bag X5050
Thohoyandou 0950

University of Venda
PRIVATE BAG X5050, THOHOYANDOU 0950, LIMPOPO PROVINCE, SOUTH AFRICA
TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060
"A quality driven financially sustainable, rural-based Comprehensive University"

Appendix B Letter of Permission to Conduct the Study



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Ref : LP-201907-014
Enquires : Ms PF Mahlokwane
Tel : 015-293 6028
Email : Kurhula.Hlomane@dhsd.limpopo.gov.za

Ms VJ Mukwevho

School of Health Sciences University of Venda

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below;

Exploring health professional's roles in cervical cancer prevention at selected gateway clinic in Vhembe District, Limpopo Province.

1. Permission to conduct research study as per your research proposal is hereby Granted.
2. Kindly note the following:
   a. Present this letter of permission to the institution supervisor/s a week before the study is conducted.
   b. In the course of your study, there should be no action that disrupts the routine services, or incur any cost on the Department.
   c. After completion of study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
   d. The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
   e. The approval is only valid for a 1-year period.
   f. If the proposal has been amended, a new approval should be sought from the Department of Health
   g. Kindly note that, the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated

Head of Department **Date** 28/11/19

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street, Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.
Website: http/www.limpopo.gov.za

Appendix C Letter of Permission to Conduct Study (Department of Health)

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OFHEALTH
VHEMBE DISTRICT

Ref: S5/6
Enq: Muvari MME
Date: 17.01.2020.....

Dear Sir/Madam. MUKWEVHO V.J.....

Permission to conduct a research on the
"PROFESSIONAL'S ROLES IN CERVICAL CANCER PREVENTION".

1. The above matter refers.

2. Your letter received on the 17.01.2020.....requesting for permission to conduct a research is hereby acknowledged.

3. The District has no objection to your request.

4. Permission is therefore granted for the study to be conducted within Vhembe District. You are expected to submit the results to the District.

5. You are however advised to make the necessary arrangements with the facilities concerned.

Wishing you success in your endeavors.

.....Patwa..... 17/1/2020.....
CHIEF DIRECTOR: DISTRICT HEALTH DATE

Private Bag X5009 THOHOYANDOU 0950
OLD parliamentary Building Tel (015) 962 1000 (Health) (015) 962 4958 (Social Dev) Fax (015) 962 2274/4623
Old Parliamentary Building Tel: (015) 962 1848, (015) 962 1852, (015) 962 1754, (015) 962 1001/2/3/4/5/6 Fax (015) 962 2373, (015) 962 227

The heartland of Southern Africa – development is about people!

Appendix D Interview Transcript

Participant Three (Facility C)

Researcher: first question: What do you know or understand about cervical cancer?

Participant: it is a condition that affects women on the cervix, from the age of 25 and above, they are target group, especially above 40 years and elderly women.

Researcher: how does the cervix get affected by cancer?

Participant: when I say the condition that affects the cervix, is like when there is cervical cancer on the cervix, there is an abnormal growth of cells, some of the cells dying because of cancer causing a wound there on the cervix.

Researcher: I heard you saying the target group is women above 40, can you explain why you are saying that?

Participant: women above the age of 40 have been through a lot of activities in their life, sexual activities and also this is the time where others have passed menopause, the immune system is also no longer active to fight with infections and conditions such as cancer so its most common that women at this age are found with cancer after being tested.

Researcher: What is your role in cervical cancer prevention?

Participant: my role is to screen women and educate them about signs and symptoms, most women are embarrassed about those signs so I encourage them and old women to come.

Researcher: Do you give health education daily?

Participant: when the patient is in my consulting room , for all the categories , for example HIV positive women and chronic patients or post-partum I then advise her to say there is something called pap smear and it helps to know if you have cervical cancer or not, some immediately say they are ready then I screen them.

Researcher: I heard you saying you educate about signs and symptoms, what are common signs and symptoms of cervical cancer?

Participant: recurrent sexual transmitted infections, lower abdominal pains and abnormal vaginal bleeding are most common to our patients.

Researcher: Do you always educated women in your presence about cervical cancer?

Participant: it depends on where I am.

Researcher: okay depending on where you are, when and how do you spread such information?

Participant: when I am at church if given a chance or at a women s club, but that is not the only condition of concern, here at work I educate all chronic patients to get screened. But I don't always talk about it. I encourage women when they come for family planning.

Researcher: Do you refer women for cervical screening?

Participant: at home they come and complain so I refer, here at work when I examine I also refer if I observe abnormalities.

Researcher: What are some of the abnormalities that you observe while examining the woman?

Patient: The cervix would be swollen and red usually.

Researcher: Do you screen patients for cervical cancer?

Participant: Yes I screen them.

Researcher: How many patients do you screen per week?

Participant: like I said if maybe a patient agrees to get screened immediately after I provided health education, I screen, so end of week I would have screened five patients but even though its lower than expected because it's supposed to be two per day but it's impossible for one sister to perform that procedure twice a day, it's about two hours and on the other side the clinic is full of other Patients waiting for help you see.

Researcher: Did you diagnose some patients with cervical cancer?

Participant: when I examine, screening is a diagnostic method on its own, so most women have sexual transmitted infections and always have lower abdominal pains so after examining I refer them or if results come back with detected abnormal cells.

Researcher: Okay, what are the prevention methods against cervical cancer at your clinic?

Participant: giving health education about teenage pregnancy , sexual positions that are rough and expose the cervix to cancer, sometimes when screening the cervix is swollen and too red, even elderly people when advise them to avoid rough sex with young men. For chronic patients we advise them to come every year and to use condoms.

Researcher: Are this prevention methods practiced every day at this clinic?

Participant: We don't provide health education daily but we try on Wednesdays when everyone is on duty to allocate others for giving health education, but if some patients came late in the afternoon while we have already started working then they have missed information because we cannot do it all day, then maybe if she enters someone s consulting room and they talk about it then but no not daily.

Researcher: What are the pitfalls of cervical cancer screening: person, administrative/institution?

Participant: people trained to screen are few, oncology nurse is only one here at the hospital so this takes time for results to be reviewed. Sometimes we screen and results are not back for almost three to six weeks then patients come back to check results and not find them and they give up. We don't do campaigns anymore due to shortage of staff, even mobile testing is no longer possible .Patients especially women are always in a hurry if they come and it's full they will go and never come back. Elderly patients also think we will tell other people about their private parts.

Researcher: What do you think of nurse's attitude concerning screening for cervical cancer?

Participant: personally I think nurses don't have a bad attitude, the issue is that screening procedure needs a patient person, this involves the vagina, and there is a smell of discharge there so others are not interested, then another thing is we can't screen due to space here, we don't even have a bulb for screening, this makes us feel less interested. Then it's too busy every day after screening there is a long queue of patients waiting for me it's a lot of work.

Researcher: Earlier on you mentioned screening as part of your role in prevention, how will that be implemented if patients are to be returned back due to overcrowd of other patients?

Participant: the problem with that is if we attend cervical patients only then other patients will end up going back home without getting help too because we would be helping few patients for hours and hours so yes the implementation is low and maybe some cases are also missed too to be diagnosed early since some patients don't return back the following day or during the weekend.

Researcher: What are the strategies that can be put in place to promote cervical cancer screening?

Participant: if it was possible, the department should extend the buildings, where you know that a cubicle is especially for screening or family planning where trained oncology nurses operate all day.

Researcher: Are there other strategies besides the ones you mentioned above that can help you implement role of cervical cancer prevention in the mean time?

Participant: Shortage of staff is mostly the main challenge, but maybe as staff we can delegate one person to say this one will be screening for that day and also giving health education. Maybe the issue of results taking too long from Laboratory can be communicated between us and them to understand what is it that makes them return too late that's all.

Researcher: Okay thank you so much, this is the end of our interview.

Appendix E: Requisition Letters for Permission to Conduct Study

University of Venda

P. BAG X 5050

Thohoyandou

01/07/19

Department of health

Private Bag X 9302

Polokwane

0700

Sir\Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN DEPARTMENT OF HEALTH

As masters of public health student at the University of Venda, I wish to conduct a research study at Department of Health. The research topic is 'Exploring Health Professionals' roles in cervical cancer prevention at selected clinics (Siloam Facility B gateway clinic, Donald Fraser gateway clinic and Facility Agateway clinic) in Vhembe District, Limpopo Province'. This research will be conducted under the supervision of Prof Ramuthuba DU and Ms Mudau AG**.** I am hereby seeking your consent to approach relevant people in the department who can be willing to assist with any information that would be requested for my study. I have provided you with a copy of my proposal, which includes copies of the measure and consent forms to be used in the research process. Upon completion of the study, I undertake to provide the Department of Health with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me. Thank you for your time and consideration in this matter.

Yours sincerely: Mukwevho Vuwani Jessica

Contact number: 0793990378

Email address: vuwanimukwevho@gmail.com

Appendix F: Permission Letter to Vhembe District

University of Venda

P. BAG X 5050

Thohoyandou

17/01/20

Vhembe municipality

Private Bag X 5006

Sibasa 0950

Sir\Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT VHEMBE DISTRICT

As masters of public health student at the University of Venda, I wish to conduct a research study based at selected clinics. The research topic is 'Exploring Health Professionals' roles in cervical cancer prevention at selected clinics in Vhembe District, Limpopo Province'. This project will be conducted under the supervision of Prof Ramathuba DU and Ms Mudau AG**.** I am hereby seeking your consent to approach relevant people in the department who can be willing to assist with any information that would be requested for my study. I have provided you with a copy of my proposal, which includes copies of the measure and consent forms to be used in the research process. Upon completion of the study, I undertake to provide the Department of Health with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me. Thank you for your time and consideration in this matter.

Yours sincerely: Mukwevho Vuwani Jessica

Contact number: 0793990378

Appendix G: Consent Letter

RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent
Appendix F

LETTER OF INFORMATION

Title of the Research Study : **Exploring Health Professionals' roles in cervical cancer prevention at selected clinics in Vhembe District, Limpopo Province'**.

Principal Investigator/s/ researcher : Mukwevho VJ, BCUR

Co-Investigator/s/supervisor/s : Ramathuba DU, PhD and Mudau AG, MCUR

Brief Introduction and Purpose of the Study: Despite availability of cervical cancer screening in health institutions, cervical cancer remains to be one of the top five most important causes of morbidity and mortality in South Africa and the world at large Although cervical cancer is preventable. It was rated as the second most common cause of cancer related deaths among older women globally (World Health Organisation, 2012). This is alarming given the fact that it is preventable and screening facilities are available in all health institutions to women in South Africa. Even though nurses play a key role in health information dissemination about cervical cancer, there seem to be shortcomings concerning women's knowledge and attitudes concerning cervical cancer screening uptake. Health professionals have a key role to play in primary cancer prevention, screening and symptomatic diagnosis. The purpose of this study is to explore and describe Health professionals' roles in cervical cancer prevention at selected gateway clinics in Vhembe District, Limpopo Province**.**

Outline of the Procedures: The researcher will go through the consent letter with each respondent. The researcher will make arrangements and appointment to meet participants during their free time in the clinics Boardroom. When collecting data the researcher will give an introduction on the research study and explain to participant the reasons for conducting the study and make them aware of the ethical considerations and give them the consent to sign if they agree to participate. The researcher will then ask permission from the respondents to use voice recorder. An audio recorder will be used to record the interview to ensure that data is not lost and will be used for data analysis purposes without missing any information. Field notes will be written down. The researcher will target to reach the total population sample of 21 professional nurses to conduct in depth interviews with participants. Inclusion criteria, the

criteria for inclusion in the sample for the proposed study will be that the participants must be professional registered nurses with more than 2 years of experience at the clinics. The rationale behind choosing nurses with more than 2 years' experience it is because they may possess more knowledge and better experience concerning cervical cancer screening and prevention. Male and female professional nurses. Exclusion criteria, the criteria for exclusion in the sample for the proposed study will be professional nurses doing mobile community services. Participants are expected to feel free and comfortable and share their knowledge during interviews.

Risks or Discomforts to the Participant: There are no risks involved in this study, participants will be safe throughout the interview.

Benefits: Participants may benefit from this study because they will realize the importance of professional growth and understanding their roles in health education and promotion regarding the prevention of cervical cancer. participants may realise and appreciate their significance on the impact to cervical cancer prevention.

Reason/s why the Participant May Be Withdrawn from the Study: Participants have full rights to withdraw if they want and they will not be forced to continue because it is voluntary and they will face no consequences by withdrawing. Participants who may fall ill during interview will be allowed to withdraw if this will affect their participation during the interviews.

Remuneration: There is no monetary or remuneration to be received, the interviews will be done voluntarily for free by those participants who are interested.

Costs of the Study: The participant will not pay or cover any types of costs for this study.

Confidentiality: Participants will be informed that they have the right to know that only data they will provide will be kept in a safe place. Information that will be obtained during the research will not be disclosed to anyone and will be kept in a safe place where no one will have access to obtain it and this is done to ensure that the participant's confidentiality is respected. No information including names and addresses of the participant will be mentioned during publication of any information that will be obtained from the interview. Each participant will be presented as a number or code names, to avoid disclosure of their identity and this is to prevent harm to the participant.

Research-related Injury: There are no injuries and adverse reactions related to the study that can happen to the participants.

Persons to Contact in the Event of Any Problems or Queries:

(Supervisor and details) Please contact the researcher (tel no.0793990378), my supervisor Prof DU Ramathuba (tel no. 015 962 8684) or the University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director: Research and Innovation, Prof GE Ekosse on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za

General:
Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population

CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (*name of researcher*), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,
- I have also received, read and understood the above written information (*Participant Letter of Information*) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Date Time Signature

I, …… …… …… ……..

(*Name of researcher*) herewith confirm that the above participant has been fully

Informed about the nature, conduct and risks of the above study.

Full Name of Researcher

…… Date**……** Signature**……**

Full Name of Witness (If applicable)

…… Date …… Signature……..

Full Name of Legal Guardian (If applicable) …… ……

Date…… Signature……

Appendix H: Interview Guideline

1. What do you know or understand about cervical cancer?

2. What is your role in cervical cancer prevention?

3. Do you always educate women in your presence about cervical cancer?

4. When and how do you spread such information?

5. Do you refer women for cervical screening?

6. Do you screen patients on cervical cancer?

7. Did you diagnose some patients with cervical cancer?

8. What are the prevention methods against cervical cancer at your clinic?

9. What are the pitfalls of cervical cancer screening- person, administrative/institution?

10. What do you think of nurse's attitude concerning screening for cervical cancer?

11. What are the strategies that can be put in place to promote cervical cancer screening?

Editing and Proofreading Report

25 May 2021

This letter serves to confirm that I, Dr I. Ndlovu of the English Department, University of Venda, have proofread and edited a dissertation titled: “Exploring Health Professionals’ Roles in Cervical Cancer Prevention at Selected Gateway Clinics in Vhembe District, Limpopo Province” by Mukwevho Vuwani Jessica.

I carefully read through the dissertation, focusing on proofreading and editorial issues. The recommended suggestions are clearly highlighted and can either be accepted or rejected using the Microsoft Track Changes Function.

Yours Sincerely
Dr Isaac Ndlovu, PhD
Lecturer: English Department
University of Venda
Private Bag
X5050
Thohoyandou
0950 South
Africa
Tel.: +27 15 962 8361
Fax: +27 15 962 4749
E-mail: isaac.ndlovu@univen.ac.za