COMPLIANCE OF CLINIC PROFESSIONAL NURSES TO THE SOUTH AFRICAN CERVICAL CANCER SCREENING GUIDELINES IN THULAMELA MUNICIPALITY, SOUTH AFRICA.

By

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A mini-dissertation submitted in partial fulfilment of the requirements for degree of Master of Public Health (MPH) at the University of Venda

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DECLARATION

I, Rangolo Nthanyiseni (9906778)**,** hereby declare that the dissertation titled **"Compliance of clinic professional nurses to the south African cervical cancer screening guidelines in Thulamela municipality, South Africa"** is my own work and that all reference material contained therein has been duly acknowledge, and that this work has not been submitted previously for another degree at this university or any other institution.

Rangolo Nthanyiseni: ..... Date: 28/07/2020

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Dedication

This study is dedicated to the Department of Health, Provincial and District Management for the effective intervention with regard to cervical cancer screening guidelines.

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I thank God the Almighty who through His grace gave me the strength and guided me throughout this study.

My gratitude does to the participants in this study, for their contribution and commitment as well as health authorities in Limpopo Province for granting permission that made it possible for this study to be a success.

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LIST OF ACRONYMS

AIDS : Acquired Immune Deficiency Syndrome

USA : United States of America

ASCUS : Atypical squamous cells of undetermined significance

ASR : Age standardized rates

CC : Cervical Cancer

CIN : Cervical intraepithelial neoplasia

CPG 'S : Clinical Practice Guideline

DoH : Department of Health

HIV : Human Immunodeficiency Virus

HPV : Human papillomavirus

LLETZ : Large loop excision of the transformation zone

LMIC 'S : Low- and middle – income countries

NBCCEDP: National Breast and Cervical Cancer Early Detection Programme

OS : Organized screening

Pap smear: Papanicolaou smear

PHC : Primary health care

SA : South Africa

STI : Sexually Transmitted Infections

VIA : Visual inspection using acetic acid

VILI : Visual inspection using Lugol's iodine

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WHO : World Health Organization

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Abstract

Despite the availability of the South African cervical cancer screening guidelines at clinics, women are still seen in the out-patient department of selected rural district hospital in Thulamela Municipality, referred from Primary Health Care (PHC) facilities with no cervical cancer screening results. Thus, cervical cancer screenings are done at a hospital and results often came back positive for cervical cancer. Such practices pose a risk of delayed cervical cancer diagnoses and its discovery at an advanced stage, increasing cervical cancer mortality rates. The purpose of this study was to investigate the compliance of professional nurses at primary health care facilities to the South African cervical cancer screening guidelines in Thulamela Municipality. This study adopted a qualitative approach as it aimed to get a better understanding on compliance of professional nurses regarding South Africa's cervical cancer screening guidelines. Non-probability sampling was used to select primary health care facilities including interested participants who were judged to possess the information that was required to answer the research question of this study. The sample size of the study was determined by data saturation. Trustworthiness was ensured by four criteria of Guba and Linclon, namely credibility, transferability, dependability and confirmability. A digital recorder was used to log individual responses during interview sessions. Data from the digital recordings were transcribed verbatim. Results were analysed and interpreted thematically. This study established that clinic professional nurses are non –compliance to the South African cervical cancer screening guidelines; nurses face several challenges such as inadequate knowledge of the cervical cancer screening guidelines, shortage of resources and shortage of staff. Recommendations that emanated from the discussion of the findings and the conclusion of this study are likely to have implications and applications for supporting and advancing the cervical cancer screenings.

Keywords: Cervical, Cancer, Compliance, Facilities, Guidelines, Primary Health Care

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction

Cervical cancer is a type of cancer that occurs in the cells of the cervix. Various strains of the human papillomavirus (HPV) play a role in causing most cervical cancers. This section covers the background, problem statement, rationale, purpose, objectives and significance of the study.

1.2 Background of the study

Basu, Nessa, Majid, Rahman & Ahma (2017) state that cervical cancer continues to be a major public health problem. Globally cervical cancer claims the lives of one quarter million women annually, cervical cancer is one of the leading causes of morbidity and mortality amongst all the gynaecological cancers world-wide (Nwabichie, Rosliza & Suriani, 2017). The incidence of cervical cancer in the United States of America (USA) has reduced in accordance to effective screening practices where cervical cancer screening was included as part of woman's health check-up.

There are two types of cervical cancer screenings, which are the Papanicolaou smear test (Pap smear) and Human Papillomavirus (HPV). According to Ali, Skirton, Clark & Donald (2017) for both these tests, the health care practitioners (both doctors and professional nurses) must collect cells from the surface of the cervix and send the specimen to the laboratory for testing to detect abnormal cells, which may develop into cancer later. It takes 3-7 years for high-grade changes in cervical cells to develop into cervical cancer. Thus, cervical cancer screening tests detects these changes before they become cancer (Ali et al., 2017). Cervical cancer is the 2ndmost common malignancy that affects women worldwide. It was previously listed as one of the most causes of cancer related death of women in the USA before screening was initiated, but now it is no longer reaching top 10 (Basu et al., 2018).

The World Health Organization (WHO) developed cervical cancer screening guidelines which countries must adopt. When cervical cancer does occur, many times is amongst women who have never been screened or have not been screened within the previous 5 years (Roland, Greek, Hawkins, Lin & Benard, 2015).

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From the mortality and incidence rates, it is seen that the developing countries such as Nigeria and South Africa, are with higher burden than the developed countries like USA and Australia. These countries with a higher burden are not able to implement a successfully organized, population-based cervical cancer screening programs despite the greatest burden of cervical cancer in these countries, which is largely related to poverty, lack of resources and infrastructure and disenfranchisement of women (Ncube, 2015).

(Nwabichie et al., 2017) reveal that it is globally acknowledged that the prevalence of cervical cancer screening as a secondary prevention is effective for reducing the incidence of cervical cancer and mortality. However, adherence with the recommended screening guidelines for cervical cancer in Japan remains relatively low (24.5%) compared with other developed countries (70%-80%) (Yoshino et al., 2012).

In today's world, cervical cancer is primarily a disease found in low income countries. Of the nearly 500,000 new cases that occur annually, 83% are in the developing world, as are 85% of the 274,000 deaths associated with cervical cancer (Roland et al., 2015). The South Asian region harbours one fourth of the burden of cervical cancer. In India alone there are an estimated 132,000 new cases and 74,000 deaths each year. Most women with cervical cancer in these countries present with advanced disease, resulting in low cure rates (Ali et al., 2010).

Several factors contribute to high burden of disease and advanced stage at presentation including poor knowledge about the disease. Furthermore, there is a lack of screening among general population (Basu et al., 2017). The situation in Pakistan is largely unknown. With the scarcity of epidemiological data, the only information available is through institutional and regional cancer registries, which may not be representative of true burden (Basu et al., 2017).

Countries with well-developed programs detect and treat precancerous abnormalities at an early stage. Cervical cancer screenings can prevent up to 80% of cervical cancer cases. The incidence of cervical cancer is steadily increasing in Sub- Saharan Africa with more than 75,000 new cases and close to 50,000 deaths a year, a toll further increase by Human Immune-deficiency Virus (HIV) infections, Cervical cancer will kill more than 443,000 women pear year world wide by 2030, nearly 90% of them in Sub- Saharan Africa (Mboumba, Prazuck, Lethu & Belec, 2017).

In South Africa (SA), women diagnosed with cervical cancer were estimated to be 7,735 new cases in 2012 and 4,248 die from the disease, though cervical carcinoma is a largely preventable

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disease (Jordaan, Michelow, Richter, Simeons & Bogers, 2016). HIV significantly increases the risk of persistent HPV infections, a risk factor in the development of cervical cancer. HIV-infected women have greater rates of pre-invasive and invasive cervical cancer rates whereas HPV infection promotes the acquisition of HIV. Additionally, the development of cervical cancer is faster in HIV-positive women (Jordaan et al., 2016). What is very scary is that South Africa has the largest expanding HIV burden in the world and it is estimated that 5.7 million South Africans currently living with HIV of whom 60% are women.

The SA cervical cancer screening guideline (2015) recommends that all asymptomatic women with unsuspected risks should be screened for cervical cancer at Primary Health Care (PHC) levels. Initial screening age for Pap smears is recommended to be 25 years or any age at diagnosis of HIV positivity. Screening intervals should be 5 years (if HIV negative) and 3 years (if HIV positive). Follow up after a single abnormal test or treatment due to abnormal pap smear results is recommended to be 5 years (if HIV negative) and annually (if HIV positive). Pap smear screening should end at age 55 or hysterectomy only after previous negative tests, or should never end if HIV positive.

1.3 Problem statement

Despite the availability of the South African cervical cancer screening guidelines, women are still seen in the out-patient department of selected rural district hospital, referred from PHC facilities with no cervical cancer screening results. Thus, cervical cancer screenings are done at a hospital and results often came back positive for cervical cancer. Such practices pose a risk of delayed cervical cancer diagnoses and its discovery at an advanced stage, increasing cervical cancer mortality rates. The purpose of this study was to investigate the compliance of clinic professional nurses to the South African cervical cancer screening guidelines in Thulamela Municipality.

1.4 Rationale of the study

Studies has been conducted in Limpopo province, which focused on the cervical cancer knowledge, attitude and practices among women attending primary health care, but no known studies has explored this topic within Thulamela municipality, Vhembe district, Limpopo province. The knowledge of patients on cervical cancer combined with compliance of professional nurses at primary health care facilities will assist in more cervical screenings done at clinic level and

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hence decrease the diagnoses of cervical cancer at advanced stages which mostly leads to treatment failure and death.

1.5 Significance of the study

The research findings may lead to recommendations that may benefit the following stakeholders: Professional Nurses will gain awareness of the cervical cancer screening guideline. HIV/Aids coordinators may be aware to refer all HIV positive women for cervical cancer screening test. Policy makers may improve cervical cancer screening strategies at primary health care facilities. Patients attending clinics will benefit by getting knowledge on cervical cancer and cervical cancer screening practices.

1.6 Purpose of the study

The purpose of the study is to investigate the compliance of clinic Professional Nurses with the South African Cervical Cancer screening guidelines in Thulamela Municipality, South Africa.

1.6.1 Specific objectives

- To describe compliance of clinic Professional Nurses to South African Cervical Cancer screening guideline.
- To explore challenges faced by clinic Professional Nurses regarding cervical cancer screening practices.
- To describe the perceived strategies of improving compliance to the South African cervical cancer screening guidelines.

1.7 Definitions of terms

Women - Women refers to an adult human female (Oxford online Dictionary, 2018). In this study, it refers to any female aged 25 years and above.

Cervical cancer - Cervical cancer is a cancer found in the cells of the cervix (The cervix is the lower part or ‘neck’ of the uterus where it joins the inner end of the vagina) Pandey & Bansal (2017). In this study, cervical cancer will mean cancer of the cervix

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Professional nurse- A person who is qualified and competent to independently practice comprehensive nursing in the manner and to the level prescribed and who is capable of assuming responsibility and accountability for such practice (Nursing Act, 2005). In the study, professional nurse refers to any registered nursing sister working at a primary health care centre having 6momth experience at that facility or any clinic.

Screening- Screening is looking for cancer before a person has any symptoms. This can help find cancer at an early stage. When abnormal tissue or cancer is found early, it may be easier to treat (Pandey & Bansal, 2017). In this study, screening refers to Pap smear tests.

Evaluation - The act or result of evaluating, a situation that requires careful evaluation: determination of the value, nature, character, or quality of something or someone (Webster, 2018). In this study evaluation refers to assessing knowledge of clinic professional nurses.

Compliance- Compliance is certification or confirmation that the doer of an action, or the manufacturer or supplier of a product, meets the requirements of accepted practices, legislation, prescribed rules and regulations, specified standards, or the terms of the contract, (Business dictionaries online, 2018). In this study compliance refers to the act of performing a Pap smear test to the client.

1.8 Summary

This chapter covered the introduction and background to the study which encompassed the problem statement, rationale, significance, aims and objectives, and the research questions. Operational definitions of key terminologies and the theoretical perspectives on which the study is premised have been provided. Chapter 2 will offer greater detail of the relevant literature consulted to place the study in its proper context of the existing body of knowledge and to gain better insight of the research topic.

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents literature review. The chapter outlines the findings of other authors about the compliance of clinic professional nurses to the SA cervical cancer screening guidelines .Topics such as epidemiology of cervical cancer, predisposing factors to cervical cancer, countries and their cervical cancer screening guidelines, the role and compliance of clinic professional nurses to cervical cancer screening guidelines, challenges faced by clinic professional nurses regarding cervical cancer screening, perceived strategies of improving compliance to cervical cancer screening guidelines.

2.2 Epidemiology of Cervical cancer

Cervical cancer is a disease in which the cells of the cervix becomes abnormal and start to grow uncontrollably. Approximately 90% are squamous cell carcinoma and the remaining 10% are adenocarcinomas. This cancer originates in the mucus producing cells of the inner or endocervix, near the body of the uterus (Asonganyi et al., 2013). The cervix is the lower narrow end of the uterus. When Cervical Cancer is found early, it is highly treatable and associated with long survival and good quality of life (Pandey & Bansal, 2017). Cervical cancer is a deadly disease once it reaches the invasive stages, but out of all the female genital tract cancer, cervical cancer is the only preventable cancer it detected at its early stages (Gilmore, 2014). Population based screening with Pap smear test is an important secondary preventative measure for cervical cancer that leads to high cure rate amongst cervical cancer patients (Rakumakoea, 2017).

Even invasive cervical cancer can often be successfully treated if detected at an early stage. With access to screening and treatment options, the estimated five-year net survival from cervical cancer is now between 60 and 70 percent in many high-income countries (Nwabichie et al., 2017). Every year cervical cancer is diagnosed in about 500,000 women globally and is responsible for more than 280,000 deaths annually and 80% of death occurs in developing countries (Pandey & Bansal, 2017). Botha & Richter (2015) states that in SA, screening aims to detect women with unsuspected cancer risk by testing asymptomatic women. Screening to start at age 25 years or at any age when HIV positivity has been diagnosed (Alexandria, 2016).

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Repeat smear after 5 years if HIV negative or unknown, or repeat after 3 years if HIV positive. Follow up after single abnormal screening test is 5 years until normal if HIV negative, and annually until normal if HIV positive, World Health Organization (2014). The incidence of cervical cancer varied widely among countries with world age-standardized rates (ASRs) ranging from 4.4 to 75.9 per 100 000 population. About 85% of all new cervical cancer cases and 87% of all cervical cancer deaths occur in the less developed region (Alexandria, 2016). High-risk regions, with estimated ASRs over 30 per 100,000, include Eastern Africa (42.7), Melanesia (33.3), Southern (31.5) and Middle (30.6) Africa. Rates are lowest in Australia/New Zealand (5.5) and Western Asia (4.4) (Nwabichie et al., 2017). Cervical cancer accounts for 7.5% of all female cancer deaths. Mortality varied 18-fold between the different regions of the world, with rates ranging from less than 2/100,000 in Western Asia, Western Europe and Australia/New Zealand to more than 20/100,000 in Melanesia (20.6), Middle (22.2) and Eastern (27.6) Africa (Nwabichie et al., 2017).

Cervical cancer is the only cancer that is almost completely preventable by safe, simple and inexpensive methods. Yet, every two minutes, one woman dies an unnecessary death from this cancer in the world (Ncube et al., 2015). Unlike other cancers that occur in older age, cervical cancer peaks between the ages of 35-65 years and not only takes the life of young women, but devastates families with young children along the way (Alexandria , 2016). Even in some countries such as the developed countries where screening programs are free of charge and widely available, the uptake is still very low among the women. This low uptake has being found to be due to lack of knowledge about the disease and screening practices (Ncube et al., 2015).

Macdonald, Trimble & Jones (2015) pinpoints that, cervical cancer screening tests are the best to have cervical cancer found early where success of treatment is likely. Screening prevents most cervical cancer by finding the abnormal cells early and treatment before the cells develops into cancer. Despite the recognized benefits of cervical cancer screening, not all American women get screened for cervical cancer and most cervical cancer diagnosis are found in women who have never had a pap test or who have not had one recently (Nwabichie et al., 2017).

Dulla, Daka & Wakgavi (2017) explain that, major success of the English cervical cancer screening programs has been its population coverage which achieved 80.6% in 2004 but had declined to 77.8% in 2014.The lowest coverage is found amongst those age 25-29 years, in 2014 63.3% of women aged 25-29 years has been screened within a 3.5years interval. Moreover 47% of women who develop cervical cancer have not been screened for the past 5 years or have never

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been screened, and this group is more likely to develop cervical cancer and then detected at an advanced stage (Ali et al., 2010). Unlike other cancers that occur in older age, cervical cancer peaks between the ages of 35-65 years and not only takes the life of young women, but devastates families with young children along the way. From the mortality and incidence is seen that the developing countries are with higher burden than the developed countries (Alec & Vassilakos, 2017). These countries with a higher burden are not able to implement a successfully organized, population-based cervical cancer screening programs despite the greatest burden of cervical cancer in these countries (Nwabinchie et al., 2017).

2.3 Predisposing factors to cervical cancer

2.3.1 Human papillomavirus (HPV)

It has become clear that essentially all cervical cancers are caused by certain types of HPV, Infection with HPV in the case of the cervix is usually aroused by sexual contact or even by skin-to-skin contact, HPV causes 90% of cervical cancer initiating event in cervical dysplasia and carcinogenesis (Pandey & Bansal, 2017). Almost all adult women have at some time contracted HPV, but in the overwhelming majority of cases HPV infection resolves within six months to two years without causing any signs of disease. Lkhagvasuren (2018) stated that rare cases where HPV infection does not resolve, where the infection is persistent, the risk of developing precancerous cervical lesions, which precedes the development of cervical cancer, is higher. Viglione (2018) argues that persistent infection with the so-called high-risk carcinogenic HPV types, notably HPV types 16 and 18, which are the most common types found in cervical cancer cases worldwide, is necessary for cancer to develop. However, this is not sufficient as the development of cervical pre-cancerous lesions and cervical cancer takes several years to occur (Bansal, Singh & Rai, 2016).

2.3.2 Sexual history- young age at first intercourse (<16 years)

Having sex at an early age increases your risk of HPV infections (Lkhagvasuren, 2018). The greater your number of sexual partners — and the greater your partner's number of sexual partners — the greater your chance of acquiring HPV (Lkhagvasuren, 2018).

2.3.3 Smoking- Smoking is associated with squamous cell cervical cancer, Smokers are more likely than non-smokers to develop certain cancers, including cervical cancer. If you smoke and have HPV infection, the risk is compounded (Murah, Ponni & Belliappa, 2018).

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2.4 Cervical cancer screening guidelines (World Health Organization, Other countries and South Africa)

2.4.1 World Health Organization cervical cancer screening guidelines

2.4.1.1 Type of screening

The panel suggest to use a strategy of screen with a HPV test over a strategy of screen with Visual inspection with acetic acid (VIA). In resource-constrained settings, where screening with an HPV test is not feasible, the panel suggests a strategy of screen with VIA and treat or strategy of screen with an HPV test and treat, over a strategy of screen with cytology followed by colposcopy and treat, WHO (2014). However, in countries where an appropriate/high-quality screening strategy with cytology followed by colposcopy already exists.

2.4.1.2 Age range and frequency of screening.

Recommended age to start screening is 30 years of age and older because of their higher risk of cervical cancer. Priority should be given to screening women aged 30–49 years, rather than maximizing the number of screening tests in a woman's lifetime. Screening even once in a lifetime would be beneficial, WHO (2018).

2.4.2 United states cervical cancer screening guideline

2.4.2.1 Type of screening

In 2012, screening every 5 years with Pap and HPV tests was added as an option for women aged 30–65 years (White et al., 2015). The greatest change was for women aged 30 to 65 years, for whom it is now recommended that those at low risk should receive Pap smear combined with HPV contesting once every 5 years. This is largely because HPV detected in women older than 30 years correlates with increasing rates of high-grade lesions. A Pap smear alone every 3 years is acceptable only if HPV contesting is unavailable (Langsjoen et al., 2015).

2.4.2.2 Age range and frequency of screening

In the United States, screening for cervical cancer is a standard component of women's routine preventive healthcare, and has dramatically reduced cervical cancer incidence and mortality over

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the last six decades (Habbema et al., 2012). Current guidelines recommend screening intervals of 3 to 5 years following normal test results, based on the screening test used (Roland et al., 2015)

2.4.3 Spain cervical cancer screening guideline

2.4.3.1 Type of screening

Organized cytology screening programs are well-established as an effective and efficient means of preventing cervical cancer, whether used alone or, preferably, in combination with the preteen HPV vaccine (Diaz, Morina, Rodrigues- Sales, Ibanez & De Sanjeso, 2018).

2.4.3.2 Age range and frequency of screening,

Current guidelines recommend that women aged 25–65 receive a cytology test every 3 years with HPV testing for triage in some specific cases (Diaz et al., 2018).

2.4.4 France's cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

According to the third cancer plan, organized screening of cervical cancer among women aged 25–65 years should be implemented in France in the forthcoming years. The most efficient way to implement organized screening in the French healthcare system is yet to be determined. France 's healthcare system recommends cervical cancer screening by annual Pap smear testing every 3 years in a woman 's lifetime (Barre, Massetti, Leleu & De Bels, 2017).

2.4.5 Brazil's Cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

Brazil's national strategy for cervical cancer screening includes using the Pap smear test every 3 years among women aged 25–64 years (Stormo, De Mourna & Saraiya, 2014).

2.4.6 Columbia's Cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

Columbia recommends Pap smear test alone every 3 years in women of ages 30 to 65 years. Thereafter women aged 30 to 65 years who want to lengthen the screening interval can be screened with a combination of Pap smear test and HPV test every 5 years (Crawford, Bernard, King & Thomas, 2014).

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2.4.7 Namibia's Cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

Pap smear screening is recommended on all women from age 21 years to 64 years, and should be repeated every 1 year (Bruni et al., 2017).

2.4.8 Zimbabwe's Cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

It is recommended that between 21-65 years, women undergo cytological testing every three years and HPV co-testing every five years after 30 years. HPV co-testing increases the chance for HPV detection (Kuguyo et al., 2017)

2.4.9 South Africa's Cervical cancer screening guideline, Type of screening, Age range and frequency of screening.

Screening aims to detect women with an unsuspected cancer risk by testing asymptomatic women. It is recommended that all South African women should initiate cervical screening at the age of 25 years or at the time of diagnosis of HIV seropositivity. The screening intervals is recommended to be 3 years if Pap smear results are negative and a woman is HIV negative, but Pap smears should be done annually to all women whose results are positive for cervical cancer and those who are HIV positive.

2.5 The compliance of Professional Nurses to Cervical Cancer screening guidelines

No previous study was found that has assessed the compliance of clinic Professional Nurses on South African, s cervical cancer screening guidelines in Thulamela municipality, South Africa. Most researchers focused on knowledge, attitudes and practices on cervical cancer screenings amongst patients but not specifically amongst Professional Nurses on the cervical cancer screening guidelines.

Townsend et al., (2014) reveal that eighty-six percent of providers used the Pap smear test to screen patients for cervical cancer. Nearly two thirds conduct annual screening of their patients, whereas 25.8% screen every 3 years. More than 45% of providers in non-funded jurisdictions used VIA. One-third of providers' screen patients annually with VIA, and 26.7% screen patients every 5 years. Thirteen percent reported not using a routine interval.

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2.6 Challenges faced by clinic Professional Nurses regarding cervical cancer screening guidelines.

In Africa, factors that have been shown to affect physicians ‘s compliance include but are not limited to: busy clinics and lack of manpower, lack of access to care, lack of transport to care and opposition to care by men (Asonganyi et al., 2013). Lack of trained providers, overburdened health facilities, insufficient supplies, inadequate lab infrastructure, loss to treatment follow-up, high costs, and cultural beliefs are some of the implementation barriers experienced (Johnson, Armstrong, Joyce, Teitelman & Buttenheim, 2018). Providers’ lack of awareness or knowledge of changes to current cervical cancer screening guidelines (Worcester, 2013)

2.6.1 Fear of pain

Women did not have pap smears done due to the fear of the procedure, raising issues that the speculum is too big and they heard other women who did it saying it is very painful (Tapera et al., 2017).

2.6.2 Lack of knowledge

Darj, Chalise & Shakya (2019) found out that a common opinion amongst patients was that cervical cancer is dangerous, unusual and requires surgery, this was evident that participants had never heard of cervical cancer. Lack of awareness of symptoms means that women sought health care only when physical symptoms appeared.

2.6.3 Shortage of staff

Cervical cancer managers reported taking care of a large number of patients, large workload hinders quality of care provided to cervical cancer screenings and patients. Nurses and Doctors reported feeling overwhelmed with a large number of patients and less staff members working with patients (Bitok, Pokhariyal, Abdul & Mcdonnell, 2013).

2.6.4 Lack of skilled health care providers

Mutyaba, Mmiro & Weiderpass (2006) concluded that nurses and medical students leave nursing and medical schools without adequate skills to be able to effectively screen women for cervical cancer whenever they go to practice. The nurses and medical students training curriculum needs review to incorporate practical skills on cervical cancer screening.

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2.7 Perceived strategies of improving Professional Nurses compliance to Cervical Cancer screening guidelines.

Re-educate the providers on recent changes and updates to cervical cancer screening guidelines (Worcester, 2013). Incorporate practical skills on cervical cancer screening in the nurses and medical students training curriculum (Mutyaba et al., 2006).

2.8 Summary

This chapter provided a literature review that focused on the compliance of clinic professional nurses to the South African cervical cancer screening guidelines. It covers epidemiology of cervical cancer, predisposing factors of cervical cancer, cervical cancer screening guidelines of WHO, other countries and SA. Challenges faced by clinic professional nurses on cervical cancer screening such as lack of skills, shortage of staff, lack of resources and fear of pain were discussed in details. Perceived strategies of improving professional nurse's compliance on cervical cancer screenings were also discussed. Chapter 3 outlines the research design and methods used in this study to answer the research questions and achieve the set objectives.

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CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter outlines the methodology that was used to collect data in this study, including the research design, study setting, population of the study, sampling techniques, sample size, data collection instrument, measures to ensure trustworthiness, data collection methods, data collection process, ethical considerations, data analysis and dissemination of the study findings.

3.2 Research design

Research design is the overall strategy that the researcher utilizes to integrate different components of the study in a coherent and logical way, thereby ensuring that one will effectively address the research problem; it constitutes the blueprint for the collection, measurement and analysis of data (De Vaus, 2001; Trochim, 2006). This research study utilizes a qualitative study design which takes into account how data were to be collected, instruments to be employed, how the instruments were to be used and the intended means for analyzing data collected. This approach allowed the researcher to gain a better insight on the compliance of clinic Professional Nurses to South African Cervical Cancer screening guideline in Thulamela municipality clinics.

3.2.1 Qualitative research

Qualitative research is an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and is conducted in a natural setting (Cresswell,2005). The primary goal of a qualitative research is to describe and then understand as opposed to mere explaining social action (Babbie & Mouton, 2012). This presents the researcher with an opportunity to understand the meaning that people continually construct about an identified problem (Merriam, 2009).

Qualitative research is descriptive and is an excellent way of obtaining information and explaining a particular phenomenon. A qualitative research approach was chosen to understand, interpret and describe the compliance of clinic professional nurses to the South African cervical cancer screening guidelines in Vhembe District, Limpopo Province.

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3.2.2 Explorative research

Welman, Kruger & Mitchell (2009) defined exploratory research as an approach which aims to find a problem or a hypothesis to be tested. It tries to identify the important variables in a particular area to formulate penetrating questions about them, and to generate hypotheses for further investigation. It also investigates the full nature of the phenomenon, the manner in which is manifested, and the other factors to which it is related. The researcher described the compliance of clinic professional nurses to South African cervical cancer screening guidelines in Thulamela municipality.

3.3 Study setting

The study was conducted in clinics under Thulamela municipality in Vhembe district of Limpopo province in South Africa. Vhembe district lies in the Limpopo province and is bordered in the east by the Kruger national park, south east Mopani district, south west Capricorn district, north east Botswana and north Zimbabwe. It covers 18,569 square kilometres. It is one of 5 districts in Limpopo district. The district has a total population of 1 302 113 with 53, 3% females and 46, 7% males. The population density is 70.1/km square. It has an uninsured population of 93.6% who are thus dependent on the public health sector for care. Vhembe district contains 4 local municipalities, which are Thulamela, Makhado, Mutale and Musina. Thulamela municipality has a population of 534,531 which is 48.72%. Thulamela municipality is subdivided into 6 local areas, which are William Eddie local area, Sibasa local area, Shayandima local area, Mutale local area, and Khakhu Madala local area and Tshaulu local area. All these local areas cover 52 Primary health care facilities in total. The researcher has selected these clinics because they refer patients to Donald Fraser hospital where the researcher once worked at the Out-patient department as an experienced Oncology nurse.

3.4 Population of the study

Brink (2014) describes population as the entire group of persons or objects that is of interest to the researcher, in other words, that meets the criteria that the researcher is interested in studying. In this study, the population refers to all Professional nurses working at Primary health care facilities under William Eddie local area (9) and Mutale local area (12). The table below has details.

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Table 3.1: clinics at William Eddie and Mutale local areas

Name of local area	Name of clinics within the local area and number of Professional nurses	Total number of Professional nurses
William Eddie local area	William Eddie health centre, Thondo – Tshivhase clinic, Vhufuli-Tshitereke clinic, Mukula clinic, Damani clinic, Makonde clinic, Tshiombo clinic, Malavuwe clinic, Malavuwe mobile clinic	107
Mutale local Area	Rambuda clinic, Makuya clinic, Lambani clinic, Duvhuledza clinic, Thengwe clinic, Mutale mobile clinic, Matavhela clinic, Mutale health centre, Guyuni clinic, Tshilamba clinic, Tshaulu clinic, Tshikuwi clinic.	120
Grand total	21	227

3.5 Sampling

Sampling refers to the researcher's process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink, 2014). For the purpose of this study, non-probability sampling was used to select clinics and interested participants who are judged to possess the information that is required to answer the research question of this study.

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3.5.1 Inclusion criteria

- Professional nurses who have minimum of 6 month experience at any Primary health care facility
- Professional nurses who screen patients in consultation rooms.

3.5.2 Exclusion criteria

- Newly qualified Professional nurses who has less than 6 month qualification and experience at any primary health care facility

3.6 Sample size

The sample size of the study comprised of 2 Professional nurses per clinic in each selected local area. The researcher earmarked to interview a total of 42 professional nurses, 18 from William Eddie local area and 24 from Mutale local area. During recruitment of participants, only 30 professional nurses volunteered where 10 were from William Eddie and 20 from Mutale local area. Data saturation was reached at participant number 7 in William Eddie and 18 in Mutale local area when there was no more new information that could be yielded by the interviews.

3.7 Data collection tool

Brink (2014), explained that the process of data collection is of critical importance to the success of a study, without high–quality data collection techniques, the accuracy of the research conclusions is easily challenged. The researcher used an unstructured interview guide with three questions namely:

(1) At this clinic, how do you screen any female patient who enters in your consultation rooms?

(2) What are the challenges you face when you comply with the South African cervical cancer screening guidelines?

(3) What do you think must be done in order for you to comply with the South African cervical cancer screening guidelines?

Follow up and probing questions were asked participants' responses. English language was used as the participants are Professional nurses.

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3.7.1 Pre-test of data collection instrument

A typical pre-test in qualitative research involves administering the interview to a group of individuals that have similar characteristics to the target study population in a manner that replicates how the data collection session will be introduced and what type of study materials will be administered as part of the process (Hurst, Oyedunni & Ovbiagele, 2015). It provides opportunities to make revisions to the tool. Clarity of questions on my data collection tool was tested on 5 participants, then questions were adjusted thereafter.

3.8 Data collection process

After Ethical clearance to conduct research has been granted (see Appendix 8), the researcher got approval from the Department of Health Limpopo province (see Appendix 3) and Department of Health Vhembe District office (see Appendix 4). The researcher visited the selected (PHC) facilities to introduce the topic of interest, explain the rationale, purpose, benefits and methodology of the study to Professional nurses and requested their participation in the study afterwards. Appointments were made with willing participants for a revisit and informed consents were signed. Face- to- face interviews were conducted at the professional nurses' clinic rooms during lunch breaks. Voice recorder was used to record the interviews and field notes were taken during the interview.

3.9 Data analysis

Brink (2014), refers to data analysis of qualitative data as an examination of text because it is non – numerical and usually in the form of written words or videotapes, audiotapes and photography. Researchers using qualitative approach tend to spend hours reflecting on the possible meanings and relationships of the data. The researcher used the thematic analytical approach to analyse the data (Braun & Claurke, 2006).

Becoming familiar with the data

The researcher familiarized herself with the depth and breadth of the content. She read through the entire data set at least once before coding, as the ideas, and the identification of possible patterns will be shaped in the process of reading through.

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Transcription of verbal data

Transcription of verbal data informs the early stages of analysis, and the researcher developed a far more thorough understanding of the data through having transcribed it. Furthermore, the close attention needed to transcribe data facilitated the close-reading and interpretative skills needed to analyse the data

Generating initial codes

The data was initially coded and collated into a long list of the different codes the researcher has identified across the data set. This phase, which re-focuses the analysis at the broader level of themes, rather than codes, involves sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes.

Reviewing themes

The researcher devised a set of themes, and these were refined. During this phase, some themes collapsed into each other, while others needed to be broken down into separate themes.

Defining and naming themes

The researcher had satisfactory thematic map of her data, then defined and further refined the themes analysed. By ‘define and refine’, it means that identifying the ‘essence’ of what each theme is about, and determining what aspect of the data each theme captures.

Producing the report

The analysis provided a concise, coherent, logical, non-repetitive, and interesting account of the story told by data within and across themes. The write-up provided sufficient evidence of the themes within the data

3.10. Measures to ensure Trustworthiness

The concepts of validity and reliability are relatively foreign to the field of qualitative research. The concepts are just not a good fit. Instead of focusing on reliability and validity, qualitative researchers substitute data trustworthiness. Trustworthiness consists of the following components: Credibility, transferability, dependability, and confirmability (Devault, 2018)

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3.10.1 Credibility

Credibility contributes to a belief in the trustworthiness of data through the following attributes: prolonged engagement, persistent observations, triangulation, referential adequacy, peer debriefing, and member checks. Triangulation and member checks are primary and commonly used methods to address credibility (Devault, 2018). Turner (2016) reveals that Triangulation is accomplished by asking the same research questions of different study participants and by collecting data from different sources and by using different methods to answer these research questions. Triangulation refers to answering the research question in several ways, such as through interviews, observation and documentary analysis and substantial description of the interpretation process (Hammarberg, Kirkman & De Lacey, 2016). Methods that were adopted by the researcher to ensure credibility of this included establishment of rapport which was achieved when the researcher outlined the necessary information regarding the research after the participants gave consent. Member checks occurred when the researcher asked participants to review the data collected by the researcher and the interpretation of that interview data. Participants were generally appreciative of the member check process, and knowing that they had a chance to verify their statements tends to cause study participants to willingly fill in any gaps from earlier interviews. Trust is an important aspect of the member check process (Birt, Scott, Cavers, Campbell & Walter, 2016). In this study, credibility was achieved by showing the participants the findings, let them listen to the voice recorder and read the field notes during data collection to confirm if they all represent their opinions accurately.

3.10.2 Dependability

Dependability involves the provision of evidence in a way that if the study is to be done again with the same or similar participants in an analogous context, the findings would be similar (Brink, Van der Walt & Rensburg, 2012). In this study, Dependability was achieved by describing the research findings, interpretations and recommendations, using an auditable trail so as to corroborate that the investigation is supported by data and is internally coherent. A tape recorder was used to increase reliability when doing all interviews.

3.10.3 Confirmability

How can one establish the degree to which the findings of an inquiry are a function solely of the subjects and conditions of the inquiry and not of the biases, motivations, interests, perspectives

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of the inquirer? To achieve confirmability, researchers must demonstrate that the results are clearly linked to the conclusions in a way that can be followed and, as a process, replicated (Mooh, Brewer, Jahuchowski-Hartey, Adams & Blackman, 2016). In this study, confirmability was achieved by reviewing the literature so as to identify and verify whether the similarities and differences of literature support the findings.

3.10.4. Transferability

Lincoln & Guba (2012) reveal that the description of data gathering must be inclusive enough to enable findings to be transferred to other situations. The descriptive interpretation resulting from the data analysis should apply to other areas. In this study, Transferability was achieved by providing a complete description of the research methodology findings and verbatim quotes from individual interviews to ensure applicability of the study to other contexts. The researcher requested someone with research experience to randomly read selected transcripts and to identify major categories, so that readers may have a clear picture of the findings.

3.11 Ethical Consideration

The following was taken into consideration:

3.11.1. Ethical clearance

Presentation of research proposal was done at School Higher Degrees Committee and University Higher Degrees Committee for approval and for quality control (Appendix 1). Then Ethical clearance was obtained from the University of Venda and Research Ethics Committee (Appendix 8)

3.11.2 Permission to conduct study

The researcher obtained permission to collect data from the Department of Health Limpopo Province (Appendix 3) and the Department of Health Vhembe district (Appendix 4).

3.11.3 Informed consent

A formal written letter of informed consent was issued to research participants before the commencement of the study to ensure that they all participate in the study out of their will and knowing what they are involving themselves into. The researcher ensured that the respondents

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are aware of the type of information needed, why the information is being sought, for what purpose, how they are expected to participate in the study and how it will directly or indirectly affect them. After thoroughly and truthfully enlightening them on the research process in one's preferred language for better understanding the researcher gave them the informed consent forms to sign as an indication of agreement of participation in the study.

3.11.4. Confidentiality and Anonymity

The participants were assured that the information provided by them would be treated confidentially and that only the researcher and the supervisors would have access to the data and that the tape recorder will be used to record the interviews for validity purposes and thereafter the tapes will be kept in a safe place for 5 years where no one can reach them, all these were explained to participants before they sign consent. The use of pseudo names helped to ensure anonymity.

3.11.5. Harm to participants

The researcher ensured that no physical, psychological or emotional harm was inflicted to participants. The researcher constructed questions in an appropriate manner as well as not in a judgmental way to avoid inflicting anxiety and psychological discomfort during the interviews. Explanation was given to participants that they were not forced to participate in the study were allowed to withdraw from the study at any time.

3.12 Dissemination of results

The findings of the research were presented to the school of Health Sciences. The findings would also be documented in a thesis, which will be submitted to the University of Venda. The research findings would also be sent to the Provincial DoH and District Health Services where research took place. The research findings would be made available on request to the PHC facilities that assisted in providing the research participants. Finally, the researcher intends to publish the research in an appropriate accredited journal. Editorial assistance was provided by a reputable language editor (Appendix 7).

3.13 Summary

Cervical cancer is also diagnosed at its advanced stage in Limpopo province where treatment is mostly not effective. It is therefore imperative to provide professional nurses with proper trainings

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on cervical cancer screening to ensure early detection of cancerous cells. This chapter outlined research methodology and ethical principles that guided this study. Chapter 4 will present the study findings and analysis.

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CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter focuses on the findings and discussion of the results. This study aimed to describe the compliance of clinic Professional Nurses with the South African Cervical Cancer screening guidelines in Thulamela Municipality, South Africa. The face-to-face interview method was used to collect data. In order to protect the identity of the participants, pseudo names were used to distinguish the participants. All interviews were recorded and transcribed. Interview transcriptions were thoroughly read over and over, noting and coding the main ideas they contained. Similar data were grouped into categories, themes then patterns, determined qualitatively before tabulating it for final analysis. Results were analysed, interpreted and presented under the following objectives:

- To describe compliance of clinic professional nurses to the SA cervical cancer screening guideline.
- To explore challenges faced by clinic professional nurses regarding cervical cancer screening practices.
- To describe the perceived strategies of improving compliance to the SA cervical cancer screening guidelines.

4.2 Presentation of findings

A total of 30 Professional nurses volunteered and took part in the one-on-one in-depth interview until data saturation was reached at participant number 7 in William Eddie area and 18 in Mutale local area. Professional nurses were asked the following three questions:

(1) **At this clinic, how do you screen any female patient who enters in your consultation rooms?**

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(2) **What are the challenges you face when you are trying to comply with the South African cervical cancer screening guidelines?**

(3) **What do you think must be done in order for you to comply with the South African cervical cancer screening guidelines easily?**

Probing questions were asked as a follow up on the responses from the participants. Data was transcribed verbatim in order to record accurately the information provided by participants.

4.2.1 Participants 'demographic information

Table 4.1 below outlines the participant's demographic information including the pseudo names, age, gender and screening experience as clinic professional nurse.

Table 4.1: The demographic information of participants

Pseudo Name	Age	Gender	Screening experience as a clinic professional nurse	PHC clinic
Joyce	55	Female	20 years	William eddie
Maria	45	Female	8 years	Guyuni
Tshimangadzo	38	Female	5 years	Matavhela
Ntondeni	40	Female	2 years	Matavhela
Vhugala	28	Female	8 months	Tshaulu
Zwonaka	35	Female	3 years	Guyuni
Andrew	50	Male	12 years	Tshifudi
Zwivhuya	30	Female	4 years	Strekstroom
Annah	26	Female	9 months	Mutale

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Freddy	32	Male	7 years	Mukula
James	29	Male	4 years	Makonde
Thendo	39	Male	9 years	Mutale mobile
Conny	44	Female	6 years	Strekstroom
Hlamarisani	25	Female	6 months	Makonde
Phyllis	47	Female	10 years	Thengwe
Rose	50	Female	9 years	Lambani
Gudson	41	Male	8 years	Khubvi
Khathutshelo	36	Female	5 years	Lambani
Amanda	34	Female	9 years	Thengwe
Tshililo	40	Female	11 years	Khubvi
Maano	43	Female	7 years	Makonde
Elekanyani	32	Male	5 years	Duvhuledza
Norah	28	Female	4 years	Guyuni
Maimo	29	Female	3 years	Tshaulu
Nancy	33	Female	3 years	Matavhela
Tinyiko	48	Male	5 years	William eddie
Oluga	40	Male	7 years	Makonde
Maanda	38	Female	3 years	Mutale mobile
Tshedza	26	Female	1 year	William eddie

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4.3 Findings of the study

This study generated information on the compliance of clinic professional nurses to the South African cervical cancer screening guidelines. Thematic results were based on the objectives of the study. From the three objectives of the study, themes and sub-themes emerged that were discussed in detail in table 4.2l.

Table 4.2: Summary of the findings from clinic professional nurses on compliance on cervical cancer screening guidelines in Thulamela municipality.

Themes	Sub-themes
1. Clinic professional nurses' screening practices of female patients entering the consultation rooms	1.1 **Professional nurses' Compliance practices**: newly diagnosed HIV positive clients were done Pap smear immediately upon consultation. The test was repeated annually during visits to the clinic. 1.2 **Professional nurses' non-compliance practices:** Attitudes, Ignorance.
2. Challenges faced by clinic professional nurses regarding cervical cancer screening guidelines.	2.1 **Patient related challenges:** Fear, Age, Cultural beliefs and Lack of knowledge 2.2 **Health care practitioner's related challenges:** Inadequate knowledge of cervical cancer, Lack of skill to perform pap smear 2.3 **Health care system related challenges:** shortage of staff, Inadequate privacy in consultation rooms, Shortage of instruments to perform pap smear
3. Professional nurses perceived strategies of improving compliance to the South African cervical cancer screening guidelines	3.1 In-service training on cervical cancer and Pap smear screening. 3.2 Pap smear campaigns

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4.3.1 Theme 1: Clinic professional nurses screening practices of female patients in consultation rooms.

Perception of one's susceptibility to cervical cancer affect screening behaviour. According to (Tapera et al., 2017) participant's lack of personal susceptibility to cervical cancer therefore believed it was not necessary for them to have a Pap smear test done. This was also found by Sara, Chaudhry, Bhowmik & Chatterjee (2010) on a study which found out that women's perceived susceptibility to cervical cancer predicts their screening behaviour.

4.3.1.1 Sub-theme 1: Professional nurses' compliance screening practices

Findings revealed that newly diagnosed HIV positive clients were done Pap smear immediately and repeated annually during visits to the clinic.

Maanda indicated that: *All HIV positive female patients who enters my consultation room are done Pap smear annually as part of the HIV management program, and those newly diagnosed of HIV positive I only do pap smear if they are not in their periods, otherwise I reschedule them to come after their menstrual periods.*

Nancy also expressed that: *It is always a reminder for me to do a pap smear when consulting a HIV positive female.*

Johnson et.al (2018) reported that several studies also used restructure strategy to combine cervical cancer prevention with other services (i.e. HIV/Acquired Immune-deficiency syndrome (Aids), Sexually Transmitted Infections (STI) testing, marriage counselling, family planning) to improve the financial and infrastructural support provided through already established programs.

4.3.1.2 Sub-theme 2: Clinic Professional nurses' non-compliance practices

4.3.1.2 (a) Screening of all asymptomatic patients – The South African cervical cancer screening guidelines aims to detect women with unsuspected cancer risk by screening asymptomatic women. None of the participants of this study has screened asymptomatic women in all the clinics visited. Most of the participants screened patients as per gynaecological complaints (e.g. lower abdominal pains, vaginal bleeding).

Nancy expressed that: *I always remember to do Pap smear when a patient complains of symptoms like lower abdominal pains, and vaginal bleedings (post-menopausal women).*

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Thendo explained that: *women coming for family planning and those with heavy vaginal discharges, are a red flag for me to do pap smears.*

Rose confessed that: *I really do not see any need of doing pap smear on a patient who has no complaints.*

4.3.1.2 (b) Screening of women from 25 years of age.

The 2015 South African cervical cancer screening guidelines states that screening must be initiated from age 25 years, which is 5 years younger than the old SA screening practises that initiated screenings from age 30 years. The cervical cancer screening registers at all clinics consulted, still has age 30 years to initiate screening. All participants are following the 30 years screening age whenever they do pap smears, any 25 year old women screened, are not counted in monthly statistics.

Phyllis expressed that: *I only perform pap smears on young women 25 years of age and below at 6 weeks post natal care as per maternity registers recommended check-ups*.

Freddy indicated that: *girls are becoming mothers at a very young age and that's where I perform pap smears as post natal check-ups.*

4.3.2 Theme 2: Challenges faced by professional nurse's regarding cervical cancer screening guidelines.

The analysis of the data yielded three sub-themes of findings namely: patient related challenges such as fear of pain, age, cultural beliefs and lack of knowledge; health care practitioners related challenges such as inadequate knowledge on cervical cancer; and health care system related challenges such as shortage of staff, inadequate privacy in consultation rooms and shortage of instruments to perform pap smear tests.

4.3.2.1 Sub- theme 1: Patient related challenges

Research have shown that there are factors that contributes to patient's agreement or disagreement to undergo pap smears screening. For an example, the majority of the participants in Vhuromu, Goon, Maputle, Lebese & Okafor (2018) study did not view themselves as being vulnerable to cervical cancer. This was regarded as a factor that would influence their utilization

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of cervical cancer screening services. This sub-themes yielded factors such as fear, age, cultural beliefs and lack of knowledge.

4.3.2.1 (A): Fear

The analysis of the study showed that some professional nurses do not perform pap smears to their patients due to fear reported by the patients. Some professional nurses reported that patients said the procedure is very painful as they heard from other women who previously did pap smears. Others assumes that the speculum is too big and therefore will be painful and enlarge their private parts.

Conny reported that: *After convincing the patient to do pap smear, I showed her all my instrument and her face changes as she said 'no, no, no that big thing will tear me apart', and she then refused to be done pap smear.*

These findings is consistent with study from Darj, Charsie & Shakya (2019) where it is reported that women did not have pap smears done due to fear of the procedures. Furthermore, the fear of what the results would be and that other people might assume that they have multiple sexual partners.

Khathutshelo expressed that: *Some patients request to come for pap smear on a different day as they fear that their friends may assume that they are unfaithful and have more sexual partners, so they opted to do pap smear when they come alone at the clinic.*

4.3.2.1(B): Age

Findings from this study revealed that 12 professional nurses came across women who refused to be done pap smears as they had an impression that they are still young and will not get cervical cancer so they do not have to do Pap smear. Older women had the impression that as they have already menopause and are no longer sexually active, they will not suffer from cervical cancer and so they refuse to be done pap smear.

Hlamarisani commented that: *Old women gets angry when you explain about pap smear, some asked if she looks like a prostitute at her age, if that is why I think she must do a pap smear*

Maria expressed that: *Another old woman once said, my child I am too old to be sexually active and so why should I do a pap smear.*

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A study carried out by (Tapera et al., 2017) revealed that most of the patients did not undergo pap smear screening because they thought they were underage (35%), and that older women who are widows or divorced did not see the need for a pap smear.

4.3.2.1(C): Cultural beliefs

Most of the professional nurses in this study revealed that older women refuses to be done pap smear as the nurses are still young and it is culturally unacceptable or considered a taboo to show your private parts to young people.

Thendo expressed that: *It is culturally considered a taboo to see an old woman naked, so therefore patients will ask for older nurses to do pap smear instead of young nurses, and that means she will not be done pap smear as we have no older nurses that she prefers.*

These experiences are consistent with other studies were participants indicated that it is unacceptable to have a young nurse see their private parts and to allow a male nurse to see their private parts (Kivuti-Bitok, Pokhariyal, Abdul & McDonnell, 2013).

4.3.2.1(D): Lack of knowledge

Norah expressed concerns that: *unlike HIV/Aids, cervical cancer is a disease that most patients know nothing about, so when I explain predisposing factors (like early sexual encounters and multiple sexual partners), it makes patients not want to do pap smears but others find information helpful and therefore agrees to be done pap smear.*

Professional nurses in the deep rural clinics revealed that most women did not know about cervical cancer and Pap smear and some did agree to have pap smears done after explanation on cervical cancer was given to them.

Kivuti-Bitok et al (2013) concluded that managers reported receiving patients who had limited knowledge about cervical cancer, signs and symptoms and Pap smear.

4.3.2.2 Sub-theme 2: Health care practitioners related challenges

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4.3.2.2 (A): Inadequate knowledge of cervical cancer

In this study, all professional nurses confessed that they do not know much about cervical cancer and hence they do not feel confident to answer questions which patients asks after they request to do pap smear on them.

Oluga confessed that: *I don't know much about cervical cancer and hence I avoid explaining something I am not sure of to the patients; I always overlook the pap smear talk due to that.*

Liu, Li, Ratcliffe and Tongtong (2013), concluded that knowledge level of health care workers who provide cervical cancer screening services was generally low with an overall combined knowledge rate of 46.9%. Knowledge about cervical cancer, screening and practices of Pap smear is low among nursing staff and there is an urgent need for integration of cervical cancer prevention issues in the nurses existing training curriculum (Vishwakawa, Rawat, Mittal & Shree, 2018).

4.3.2.2 (B): Lack of skills to perform a Pap smear

In this study, most of the professional nurses verbalizes that they have no confidence in performing a Pap smear as they have no proper workshops and in-service training on how to do a Pap smear. Some said they were taught by fellow professional nurses.

Maria explained that: *I did Pap smear five times since I worked in the clinic, my results always comes back insufficient (to be repeated), so we need workshops.*

Savas & Taskin (2011), determined that 60.6% of professional nurses working in gynaecological clinics had no prior work experience and receive no in-service training on Pap smear. Mutyaba et al., (2005) concludes that nurses and medical students leave nursing and medical schools without adequate skills to be able to effectively screen patients for cervical cancer wherever they go to practice, their training curriculum needs review to incorporate practical skills on cervical cancer screening.

4.3.2.2 (C): Attitudes

This study revealed that some professional nurses has a negative attitude towards Pap smear and hence will not convince patients to do Pap smear.

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Tshililo stated that: *Pap smear takes long to complete and there's always a long cue of people waiting to be seen, and besides I'm in no mode to always look at other women's private parts*.

Gudson also expressed that: *As a male nurse, I leave the pap smears to the female nurses, I don't want to be sued for sexual harassment.*

Ntondeni explained that: *If a patient refused to be done Pap smear, I do not have time (she frowns and shakes her head) to beg or convince her as there is always a long cue waiting to be assisted*

Negative nurse's attitudes towards cervical cancer screening hinders both the nurse and the patient to do pap smear test. Some respondents were also concerned about the hostile attitude of the health workers Binka, Nyarko, Asare & Doku (2019). Mutyaba, Mmiro and Weiderpass (2005), concluded that despite knowledge on cervical cancer and prevention by screening using a Pap smear test, attitudes and practices towards screening were negative amongst health care practitioners. There is need to explain and understand the causes of these attitudes and practices and to identify possible interventions to change them.

4.3.2.2 (D) Ignorance

Elekanyani expressed that: *I really have no idea that there is a guideline for cervical cancer screening.*

Tshimangadzo expressed these concerns:

Since I qualified 5 years ago, I've heard about cervical cancer screening but has never done even one Pap smear, I can't say I know how to do it though.

Liu,Li,Ratcliffe & Tongtong (2013), concluded that knowledge level of health care workers who provide cervical cancer screening services was generally low with an overall combined knowledge rate of 46.9%. Knowledge about cervical cancer, screening and practices of Pap smear is low among nursing staff and there is an urgent need for integration of cervical cancer prevention issues in the nurses existing training curriculum (Vishwakawa, Rawat, Mittal & Shree, 2018).

4.3.2.3 Sub-theme 3: Health care system related challenges

The following challenges emerged from this sub-theme such as shortage of staff, inadequate privacy in consultation rooms, and shortage of instruments to perform pap smears.

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4.3.2.3 (A): Shortage of staff

Professional nurses in this study reported that shortage of staff is the main cause of not performing Pap smear because the patients are too many and one Pap smear takes a long time, hence this will increase the waiting time of the patients and complaints will increase.

Tshedza voiced the following concerns: *Look at the cue outside, do you think 2 professional nurses will manage if performing pap smears in-between so many patients? As it is we are not managing to achieve the expected waiting time for each patient in this clinic, so if we add pap smears we will have problems.*

Joyce expressed her concerns on shortage of staff: *the work load is too much already and we are not managing being 3 professional nurses per shift*

Cervical cancer managers reported taking care of a large number of patients, large workload hinders quality of care provided to cervical cancer patients. Nurses and Doctors are overwhelmed with a large number of patients and less staff members working with patients (Kivuti-Bitok et al, 2013).

4.3.2.3 (B): Inadequate privacy in consultation rooms

In this study, it was noted that consultation rooms has no curtains to close while performing pap smear, there are no keys to lock the doors as an alternative measure and hence any nurse can just come into the room while doing a pap smear, this is not fair to the patients.

Maimo reveal that: *Anyone can just come into the room while I am busy with a pap smear, this is invading the privacy of the patient, look at the door it cannot lock*

The researcher observed that the consultation room has no screening curtain, cannot lock, the couches are torn apart. Professional nurses at mobile clinics reveals that the couches in their mobile clinic vans are broken and not user friendly. No literature was found to support these findings on this sub-theme.

4.3.2.3(C): Shortage of instruments to perform Pap smears

The professional nurses in this study reported that they have shortage of vaginal speculum, spatula and slides. They are still using old vaginal speculum that needs to be autoclaved but the autoclaving machines are not working well. No literature was found on this sub-theme.

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Tshilidzi expressed concerns that: *Vaginal speculums are only 5 in this clinic. The autoclaving machine is not working for the past 4 months, so how am I supposed to do pap smears?*

4.3.3 Theme 3: Perceived strategies of improving professional nurses' compliance to the South African cervical cancer screening guidelines.

The following strategies are perceived to can improve and encourage professional nurses to perform Pap smear to all asymptomatic females entering the consultation rooms.

4.3.3.1 Sub-theme 1: In-service training and peer education on cervical cancer and Pap smear screenings.

In-service trainings of professional nurses will give them confidence and knowledge needed to do pap smears.

Joyce voiced the following concerns: *cervical cancer workshops should be done frequently in order for professional nurses to be confident in doing pap smears because if we know more we will be able to assist patients when they come for consultation.*

Andrew suggested that: *if as nurses we do peer education every Wednesday and basically talk about cervical cancer and pap smear, we will gain more knowledge sharing. Also we can get a patients who was done pap smear and who had cervical cancer to share their experiences with other patients.*

Health care workers at clinics can educate females' especially young females on risk factors for cervical cancer and motivate them to have a Pap smear test performed (Tapera et al., 2017). Training of more cervical cancer prevention service providers who should be fairly distributed between urban and rural areas, it should ensure that service providers are technically supported through periodical supervision (Maseko, Chirwa & Muula, 2015).

Liu et al., (2017) concluded that health promotion and education on cervical cancer knowledge should not only target women but also health care workers. Continuing education for health care workers should be provided so that the frontline health workers are equipped with up to date knowledge and skills.

Amanda raised that: *in-service education will help us to be more confident to even teach students who are allocated here sometimes to also do pap smear to patients. This will help in covering a lot of patients.*

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4.3.3.2 Sub-theme 2: Making use of billboards, television and radios

(A) **Tshililo** expressed concerns that: *cervical cancer should be advertised in billboards, televisions and radios as this will make the pap smear campaigns more effective because patients will already have some knowledge on cervical cancer.*

(B) **Freddy** suggested that: *diseases like HIV/Aids, TB, cervical cancer must start to be combined as trio campaigns because they affect each other. This will help patients to understand better and see the importance of doing pap smears.*

Maseko et.al (2015), recommends that Pap smear campaigns should be done, and that the messages in the campaigns should be organized in such a way that they take into account the educational, sociocultural and religious barriers which are hindering the women to access cervical cancer prevention services.

Increased community awareness and emphasis that screening would not involve a pelvic examination, can be done in privacy, and would still involve provider counselling to encourage broader participation in organized screening campaigns (Oketch et al., 2019).

4.4 Summary of the chapter

Chapter four analysed the data collected from clinic professional nurses on compliance to cervical cancer screening guidelines and the results were discussed with reference to the literature. Themes and sub-themes were discussed using literature control. Chapter five will discuss the conclusions, recommendations and limitations of the study.

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CHAPTER 5

SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions and recommendations from the study, based on the data analysed in the chapter four. The conclusions and recommendations will be based on the purpose and objectives of the study. The purpose of this study was to describe the compliance of Primary health care Professional Nurses on the South African Cervical Cancer screening guidelines in Thulamela Municipality, South Africa. The objectives of this study were as follows:

- To describe Compliance of clinic Professional Nurses to South African Cervical Cancer screening guideline.
- To explore challenges faced by clinic Professional Nurses regarding cervical cancer screening practices.
- To describe the perceived strategies of improving compliance to the South African cervical cancer screening guidelines.

5.2 Summary of the study

A qualitative exploratory research design was employed in this study. The target population was clinic professional nurses consulting patients in consultation rooms. The participants were responsible for screening patients in totality when visiting the clinics. The researcher used purposive sampling method and the point of data saturation was researched after fifteen professional nurses were interviewed. The data collection instrument was an in-depth individual interview using interview guide and data analysis was done using the thematic analysis approach. Emerging themes and subthemes were discussed using literature support.

The study revealed that the cervical cancer screening areas where nurses comply and those where nurses do not comply including different challenges, which influence clinic professional nurses to comply or not to comply with the South African cervical cancer screening guidelines.

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5.2.1 Theme 1: Clinic screening practices of female patients in consultation rooms.

The study revealed the following sub-themes: compliance practices and non-compliance practices.

5.2.1.1 Compliance practices.

Professional nurses are partially compliant on some aspect of the guidelines. HIV positive females were done pap smears during consultation at the rooms. The following clinics are performing Pap smears to patients at diagnosis of HIV positivity and annually afterwards, these clinics are Matavhela, Guyuni, Thengwe, Mutale mobile, Makonde, Mukula, Strekstroom, Tshifudi, Tshaulu, Duvhuledza, Lambani, William-Eddie , Mutale, and Khubvi.

5.2.1.2 Non-compliance practices

5.2.1.2 (a) Screening of all asymptomatic patients

The South African cervical cancer screening guidelines aims to detect women with unsuspected cancer risk by screening asymptomatic women. None of the participants of this study has screened asymptomatic women in all the clinics visited. Most of the participants screened patients as per gynaecological complaints (e.g. lower abdominal pains, vaginal bleeding).

5.2.1.2 (b) Screening of women from 25 years of age.

The 2015 South African cervical cancer screening guidelines states that screening must be initiated from age 25 years, which is 5 years younger than the old SA screening practises that initiated screenings from age 30 years. The cervical cancer screening registers at all clinics consulted still has age 30 years to initiate screening. All participants are following the 30 years screening age whenever they do pap smears, any 25 year old women screened, are not counted in monthly statistics. Some clinics are doing pap smears at 6 weeks post natal care check-ups as per maternity register recommendations, these are Guyuni clinic, Thengwe clinic, Mukula clinic and Duvhuledza clinic and William Eddie.

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5.2.2 Theme 2: Challenges faced by clinic professional regarding cervical cancer screening

5.2.2.1 Patient related challenges

These includes age, fear, cultural beliefs and lack of knowledge

- Age - the study revealed that some patients thought because they are still young, they will not suffer from cervical cancer so there is no need to do Pap smear. Whereas older patients thought that they are safe from cervical cancer as they have menopause and no longer sexually active.
- Fear – patients are afraid that the procedure is painful, and fear that the speculum used is too big that may cause severe pain.
- Cultural beliefs - Cultural beliefs also play a role as some patients considered it a taboo to expose their private parts to younger professional nurses or male professional nurses.
- Lack of knowledge - Generally all sums up to lack of knowledge about cervical cancer as the main cause because after professional nurses explained about cervical cancer to patients, some became more at ease and agreed to be done pap smears.

5.2.2.2 Health care practitioners related challenges

The study revealed that:

- Inadequate knowledge of cervical cancer - contributed to the professional nurse's confidence in explaining about it to the patients. Inadequate knowledge on South African cervical cancer screening guidelines made professional nurses to miss patients that were supposed to be screened for cervical cancer as professional nurses concentrated on complaints of patients to do pap smears instead of all asymptomatic women to be done pap smears
- Inadequate skills - Some professional nurses did not want to do a pap smear as they were not trained and were not confident about it.

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5.2.2.3 Health care system related challenges

Findings revealed that:

- Shortage of staff - made professional nurses to omit pap smears at it takes a long time to do due to paper work while there is a minimum number of professional in the clinic to screen a large number of patients.
- Inadequate privacy in consultation rooms - makes it difficult for professional nurses to perform a pap smear as there are no curtains to screen patients in and this invades on the privacy of the patient.
- Shortage of instruments to perform pap smear - speculum to use are less due to lack of autoclaving machines, this caused patients to be left with no pap smear done.

5.3 Limitation of the study

The study focused on clinics under Thulamela municipality in Vhembe district of Limpopo province and therefore the findings cannot be generalized, however, a detailed description of the study was provided, which shows transferability of the study.

5.4 Recommendations

The following recommendations has been made based on the conclusions reached in the study

5.4.1 Strengthening the South African cervical cancer screening guidelines – a systematic review of literature can be done to search for strategies used internationally to enhance compliance. This is because United States proved to have effective screening and treatment strategies where there were only 13,170 new cases of cervical cancer and 4,250 deaths in 2019, (Beddoe 2019).

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5.4.2 Employee motivation

5.4.2.1 Expectancy theory

This theory reveals that in order to understand people's level of effort towards a task, one must know their causal beliefs about the situation, and what is important to them. Unless people believe that their efforts will lead to the desired performance, they are not likely to try very hard (Mathibe, 2008).

5.4.2.2 Elements of the expectancy theory

5.4.2.2 (a) Expectations / Goals

Mathibe (2008), explained that when employees know and understand what is expected from them, when those expectations are to be and how those expectations should be met, they will be motivated to achieve those goals within the set time frame. Goal setting generates confidence in the work place. If professional nurses believe that performing pap smears will also benefit them in return, they are most likely to screen all patients they consults. This will fulfil the goals of cervical cancer screening, which is to reduce cervical cancer death in South Africa.

5.4.2.2 (b) Effort

Effort is a conscious exertion of power, energy to get something done. After understanding the goals and having their own expectations, professional nurses may be encouraged to make an effort of performing pap smears as per stipulated guidelines. This help to reduce cervical cancer death in South Africa.

5.4.2.2 (c) Performance

Performance is defined as the action or process of performing a task or function. Performance management is a continuous cycle of improving job performance with goal setting, feedback, coaching, rewards and positive reinforcement (Mathibe, 2008).

Including cervical cancer screenings in performance appraisals may encourage professional nurses to perform pap smears on all patients they screen as per SA cervical cancer screening guidelines knowing that the screenings contributes to their annual performance ratings.

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5.4.3 In-service trainings and workshops

- In-service trainings on cervical cancer must be done often by the Department of Health at clinics in order for professional nurses to acquire more knowledge on cervical cancer and more skills to perform pap smears.
- More Cervical cancer awareness programs and advertisement must be done by the Department of Health and combined together with HIV/AIDS and TB in order for patients to understand it and know about cervical cancer and pap smears.

5.4.4 Employment of more professional nurses: Vhembe District Department of Health should employ more professional nurses to work at the clinics because most patients are missed there, causing patients to develop cervical cancer which is costly to treat.

5.5 Implications for further research

This study highlighted a number of researchable aspects that could be pursued further,

I. Studies may be done on developing strategies to enhance compliance to the South African cervical cancer screening guidelines.

II. Another study may concentrate on measures that can be done to strengthen the current South African cervical cancer screening guidelines.

5.6 Summary

The findings revealed that clinic professional nurses did not comply with the South African cervical cancer screening guidelines. It was also revealed that professional nurses has limited knowledge on cervical cancer and Pap smear screening.

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APPENDIX 1

UNIVERSITY OF VENDA

OFFICE OF THE DEPUTY VICE-CHANCELLOR: ACADEMIC

TO : MR/MS N. RANGOLO

SCHOOL OF HEALTH SCIENCES

FROM: PROF J.E CRAFFORD

DEPUTY VICE-CHANCELLOR: ACADEMIC

DATE : 22 FEBRUARY 2019

DECISIONS TAKEN BY UHDC OF 22ND FEBRUARY 2019

Application for approval of Masters research proposal in Health Sciences: **N. Rangolo (9906778)**

Topic: "Compliance of Clinic Professional Nurses to South African Cervical Cancer Screening Guidelines in Thulamela Municipality, South Africa."

Supervisor	UNIVEN	Dr. T.G Tshitangano

UHDC approved Masters proposal

PROF J.E CRAFFORD
DEPUTY VICE-CHANCELLOR: ACADEMIC

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LIMPOPO PROVINCE
RECEIVED
29 NOV 2019
VHEMBE DISTRICT

APPENDIX 2

University of Venda

P/bag X5050

Thohoyandou

0950

Department of Health

Private bag X9302

Polokwane

0700

Dear Sir/Madam

Re: Request to conduct Research Project

I Rangolo Nthanyiseni, a master's student at the Department of Public health of the University of Venda hereby request for permission to undertake a research study.

My topic is: **Compliance of clinic professional nurses to South African Cervical cancer screening guidelines.** I would like to conduct this study in clinics under William Eddie and Mutale local areas in Thulamela municipality, Vhembe district.

My objectives are:

- To describe compliance of clinic Professional Nurses to South African Cervical cancer screening guidelines.
- To explore challenges faced by clinic Professional Nurses regarding cervical cancer screening practices.
- To describe the perceived strategies of improving compliance to the South African Cervical cancer screening guidelines.

Hoping that you find this in order.

Thank you.

Rangolo Date: 01/08/2019

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APPENDIX 3

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Department of Health

Ref : LP- 201910 - 005
Enquires : Ms PF Mahlokwane
Tel : 015-293 6028
Email : Kurhula.Hlomane@dhsd.limpopo.gov.za

R Nthanyiseni

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below;

Compliance of Clinic Professional Nurses to South African Cervical Cancer Screening Guidelines in Thulamela Municipality, South Africa.

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

25/11/19
Date

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street, Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.

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APPENDIX 4

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OFHEALTH
VHEMBE DISTRICT

Ref: S5/6
Enq: Muvari MME
Date: 03/12/2019

Dear Sir/Madam JNTHANYISENI R

Permission to conduct a research on the
"COMPHANCE OF CLINIC PROFESSIONAL NURSES TO SOUTH AFRICA".

1. The above matter refers.

2. Your letter received on the 03/12/2019 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.

.....
CHIEF DIRECTOR: DISTRICT HEALTH

3/12/2019
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

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RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent

Appendix B

LETTER OF INFORMATION

Title of the Research Study : Compliance of clinic professional to South African cervical cancer screening guidelines in Thulamela municipality, South Africa.

Principal Investigator/s/ researcher : Mrs Rangolo Nthanyiseni, student

Co-Investigator/s/supervisor/s : Dr T.G Tshitangano, HOD (school of public health)

Brief Introduction and Purpose of the Study: The purpose of the study is to describe the compliance of clinic Professional Nurses to South African cervical cancer screening guidelines in Thulamela municipality, South Africa.

Outline of the Procedures :

The study involves your participation in an in – depth, face –to- face interview that will be similar to an everyday conversation. Your participation has been identified as a primary health care facility Professional Nurse who screens patients daily. The face- to – face interview would last approximately one hour and if it is necessary, your permission will be sought to extend the interview beyond that. The interview will take place at a time and venue which is suitable to you.

The interview will be recorded on audiotape if you permit it and the tape will be safely stored at the University. You will have the opportunity to check taped transcripts of your interview. You are free to request that interviews not be taped, and in this case I will kindly request permission to take notes instead during the interview. There is no pressure to answer any of the questions, but rather it is hoped that you will willingly and honestly answer all the interview questions. At any point during the interview you may withdraw from the study and questioning if you so wish.

Risks or Discomforts to the Participant: There are no anticipated risks during the study to the participants, but he / she can withdraw at any time if he/she feels any discomfort or threatened in any way.

Benefits: Please note that participants in this study will not be paid any incentives and participation is voluntary, which means that you are free to withdraw at any time if you feel

Reason/s why the Participant May Be Withdrawn from the Study: There are no anticipated risks during the study to the participants, but he / she can withdraw at any time if he/she feels any discomfort or threatened in any way.

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Remuneration: Participant will not receive any monetary or other types of remuneration, participation is purely voluntarily.
Costs of the Study: Participant will not be expected to cover any costs

Confidentiality: Please note that any information you will provide will be treated as confidential and therefore will not be divulged to anyone without your consent. Pseudo names will be used when publishing this study.

Research-related Injury: There are no anticipated risks during the study to the participants, but he / she can withdraw at any time if he/she feels any discomfort or threatened in any way. There will not be any compensation to the participant on any injury (emotional or physical) incurred during participation to the study.

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

Please contact the researcher, Mrs Rangolo Nthanyiseni cell no: 0721106599, email: thendorangolo@gmail.com, my supervisor , Dr T.G Tshitangano at 0824484111, email : Takalani.tshitangano@univen.ac.za, 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.

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- 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, ……. **……** **……** …….. ,

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**……**

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate

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language (grade 10 level- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counseling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

References:

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes* http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/

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APPENDIX 6

APPENDIX 1: INTERVIEW GUIDE

Questions:

(1) At this clinic, how do you screen any female patient who enters in your consultation rooms?

(2) What challenges do you face when complying with the South African cervical cancer screening guidelines?

(3) What do you think must be done in order for you to comply with the South African cervical cancer screening guidelines?

Follow up and probing questions will be asked.

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APPENDIX 7

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THOHOYANDOU

0950

29 November 2018

TO WHOM IT MAY CONCERN

Topic of the proof read Masters Proposal: Compliance of clinic Professional Nurses to South African Cervical Cancer Screening Guidelines in Thulamela municipality, South Africa

Author: Nthanyiseni Rangolo

Student number: 9906778

This serves to confirm that the above mentioned proposal was proof read for glaring language errors.

Hoping you will find this in order.

Faithfully yours

Dr. LMP Mulaudzi

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RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:

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9906778

PROJECT TITLE: **Compliance of clinic professional nurses to the South African cervical cancer screening guidelines in Thulamela Municipality, South Africa.**

PROJECT NO: **SHS/19/PH/15/1406**

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

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Dr TG Tshitangano	University of Venda	Supervisor
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ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: June 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

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