KNOWLEDGE REGARDING CERVICAL, CANCER AND ITS SCREENING AMONG WOMEN AT MANKWENG HOSPITAL LIMPOPO PROVINCE, SOUTH AFRICA.

BY

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DECLARATION

I declare that the mini-dissertation hereby submitted to the University of Limpopo, for the degree of Master of Public Health, on knowledge regarding cervical cancer and its screening among women in Mankweng Hospital, Limpopo Province, South Africa, has not previously been submitted by me for a degree at this University or any other University, that it is my work in design and in execution, and that all the material contained herein has been duly acknowledged

RNS.

2017/09/12

Date

DEDICATION

In loving memory of my late father Peter Lekgowanyana Mapulane who always encouraged me and my sibling to take education very seriously. You will forever be remembered Ngwato.

To my husband, Lesiba, Abel for his unconditional love, support and encouragement throughout my studies and my children,Tumi Mokgaetji, Tshego Shoroane, and Tebo Madikgoshing for their support and understanding. My grandson Kamo Malope for his inquisitiveness, wanting to know why I am always on my Laptop and what is it that I am writing.

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ABSTRACT

Introduction: Cervical cancer is the common cancer among women worldwide. Knowledge with regard cervical cancer and early detection through screening is of utmost importance in the lives of every woman in South Africa. Every woman over the age of 30 in South Africa is entitled to three free Pap smear once in their life time and knowledge about Pap smear is essential.

Purpose: The purpose of the study was to determine the knowledge regarding cervical cancer and its screening among women in Mankweng Hospital Limpopo Province, South Africa.

Methodology: Quantitative descriptive cross sectional design was conducted. Data collection was done using structured questionnaires and data was analysed using SPSS. A sample of 206 was calculated and only women age 30 years and above visiting the general outpatient department in Mankweng Hospital participated in the study.

Results: In this study the results revealed that there is no difference in percentage with regard adequate knowledge 91 (44.2%) and inadequate knowledge 91 (44.2%) with 24 (11.7%) for those respondents who were not sure, regarding cervical cancer. This indicates that generally women have poor knowledge with regard cervical cancer. About 92(44.7) % respondents had adequate knowledge and 73 (35.4%) had inadequate knowledge while those respondents who were not sure constituted 41(19.9%),with regard cervical cancer screening, which also indicate poor knowledge which cannot compel a woman to go for cervical cancer screening.

Recommendations: Intensification of Health education with regard cervical cancer and its screening through collaboration between the Department of Health and Education by incorporating health education at primary School level.

Conclusion: An emphasis on health education with regard cervical cancer and its screening add more value with regard sufficient knowledge and can be used as a tool to encourage women to undergo Pap test for early detection.

Key words: cervical cancer, cervical cancer screening, knowledge

DEFINITION OF TERMS

Knowledge

Knowledge refers to a collection of specific and related facts and information about a particular topical area. It is also referred to as a body of information needed to perform a task (Coetzee and Schreuder, 2010).

In this study knowledge will mean the level of knowledge with regard to what cervical cancer screening is the importance of doing the test, how often and for how much is the test done.

Cervical cancer:

Cervical cancer is a disease that begins in the cervix of the female reproductive system. The cervix is the lower portion of the uterus that connects the upper vagina to the uterus (South African Litigation Centre, 2012).

In this study Cervical cancer will mean, abnormal cervical lesions found on the mouth of the uterus.

Screening

Screening refers to testing in individuals who are asymptomatic for a particular disease (i.e. they have no symptoms that may indicate the presence of disease (American cancer society, 2013).

According to this study screening will mean, test used to look for diseases before a person can have symptoms.

LIST OF ABBREVIATIONS

OPD:	Out Patient Department
Pap smear:	Papaniculou Smear
HPV:	Human Papilloma Virus
DNA:	De oxy ribose Nuclear Acid
VIA:	Visual Inspection with Acetic Acid
WHO:	World Health Organisation
NCD:	Non Communicable Diseases
SALC:	South African Litigation Centre
HGSIL:	High Grade Squamous Intraepithelial Lesion
SPSS:	Statistical Package for Social Science
TREC:	Turfloop Research Ethics Committee
STI:	Sexually Transmitted Infections
IBM:	International Business Machines
PHC:	Primary health care

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CHAPTER 1: ORIENTATION AND BACKGROUND

1.1 Introduction

Cervical cancer is cancer that is found at the entrance to the womb. Amongst all cancers it is one that is common in women. It occurs when cervical cells grow out of control and in most cases Human Papilloma Virus is the cause. Although it could be prevented and cured, most women with the disease continue to lose their lives every year especially in developing countries. It is the fourth most common cancer affecting women worldwide after breast, colorectal and lung cancer; it is most notable in the lower–resource countries of Sub-Saharan Africa (World Health Organisation, 2013).

There were an estimated 266.000 deaths from cervical cancer worldwide in 2012, amounting for 7, 5% of all female deaths. Almost nine out of ten (87%) cervical cancer deaths occur in less developed countries (Globacon, 2012). It is the second most common form of cancer amongst South African women; approximately one in every 41 women will within their lifetime develop this form of cancer (National Guidelines for Cervical Cancer Screening Programme, 2006).

Women with multiple sexual partners are in danger of having cervical cancer. Infection also depends on age at first intercourse. Once infected progression is very slow, sometimes taking some years and therefore early detection, screening and treatment could be vital. There are various effective screening methods like Human papilloma virus test (HPV), Cytology based test (Pap smear) and unaided visual inspection with acetic acid (VIA) (WHO, 2013).

Almost 70% of global burden falls in areas with lower levels of development and more than one fifth of all new cases are diagnosed in India (Thippeveeranna, Mohan, Singh & Singh, 2013). In sub-Saharan Africa 34.8% new cases of cervical cancer are diagnosed per 100 000 women annually and 22.5% per 100 000 women die from the disease. These figures compare with 6.6% and 2.5% per 100 000 women respectively in North America. The drastic difference can be explained by lack of access to effective screening and to services that facilitates early detection and treatment (WHO, 2013).

In a study conducted in Mangalore on knowledge and screening for cervical cancer among women it was revealed that the majority of women have poor knowledge about cervical cancer (81, 9%) and its screening (83, 5%). Only 6 women out of 83 women had undergone screening. Whatever little knowledge the women had was obtained from mass media (Harsha & Shubham, 2014).

WHO(2013) through its prevention and control of Non-Communicable Diseases (NCDs) 2013-2020, prioritised cervical cancer after identifying that it is a burden to health care facilities and patients. The organisation is trying to reduce (Human Papilloma Virus) HPV infection, treat cervical precancerous lesions and make available treatment and palliative care. The prevention plan is aimed at three levels: primary, secondary and tertiary with each level focusing on a specific goal. Since this intervention is at Global level, WHO proposed that each individual National Health should adopt, implement and sustain such programmes to reduce the burden caused by Cervical Cancer (WHO, 2013).

According to the Cervical Cancer and Human Papilloma virus South Africa: a guide for screening and testing (2010), there is no population wide screening in South Africa. In several areas screening does take place, in private sector opportunistic screening is commonly practical. Cervical cancer screening is acknowledged as currently the most effective approach for cervical cancer control however in most countries including middle income developing countries the existing programmes are failing to achieve a major impact (WHO, 2013).

Southern African countries have an obligation under informational and regional law to provide effective Cervical Cancer services. The legal obligation emanating from these treaties require countries to issue and implement National policies on comprehensive cervical cancer management, ensure women have full information on Cervical Cancer, make available and provide access to prevention for cervical cancer and make provision for palliative care for women with advanced cervical cancer (South African Litigation Centre, 2012).

In South Africa a policy exists where all asymptomatic women, 30 years and above are offered three free pap smears at ten-year interval. In the Western Cape in 2005, of the 62 331 women screened, 45 997 women were over the age of 30 years (74%).

Abnormalities were detected in 7.3% of smears. Similar results were reported for other provinces of South Africa. In Kwa-Zulu Natal 28,760 smears were performed in 2005 accounting for 26% of targeted number of women remaining unscreened (Moodley, 2009).

The study will determine the knowledge regarding cervical cancer and its screening among women for early detection which results in effective surgical management of cervical lesions.

1.2 Statement of the problem

Despite Government's initiative in South Africa to provide every asymptomatic woman over the age of 30 with an opportunity for three free pap smears during her lifetime with 10 years' interval between the smears to assist with early detection of Cervical Cancer cells (Clinical Guidelines: Cervical Cancer and Human Papilloma virus, 2010), women are still presenting to health facilities with advanced signs and symptoms of cervical cancer. According to daily register in Mankweng Hospital about 150 patients who already completed treatment are coming for review every month, and about 80 (53,5%) new patients with cervical cancer are diagnosed every month. These patients are screened from peripheral Hospitals and clinics around Limpopo and report to Mankweng Gynaecology clinic with abnormal Pap smear results of which most of them are already in an advanced stage of Cervical Cancer. The study will determine the knowledge regarding Cervical Cancer and its screening among women in Mankweng Hospital, Limpopo Province South Africa.

1.3 Purpose of the study

1.3.1 Aim

The aim of the study is to determine the knowledge regarding cervical cancer and its screening among women in Mankweng Hospital Limpopo Province, South Africa.

1.3.2 Objectives

- To describe knowledge regarding cervical cancer and its screening among women in Mankweng Hospital, Limpopo Province, South Africa.

1.3.3 Research question

What is the knowledge of women regarding cervical cancer and its screening in Mankweng Hospital, Limpopo Province, South Africa?

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Literature is all the written sources relevant to the topic of interest. A literature review involves finding, reading, understanding, and forming conclusions about the published research and theories as well as presenting it in an organised manner (Brink, Van der Walt & Van Ransburg, 2012).

Brink et al (2012) further stated that the purpose of a literature review in quantitative research is to direct the planning and execution of a study. At the beginning of the study the major literature review is conducted and it will include both theoretical and empirical literature that addresses the current knowledge of the phenomenon under investigation. The research method section includes sources to validate the specific consideration. The purpose of the literature review in this study is to obtain information in the knowledge regarding cervical cancer and its screening among women at Mankweng Hospital Limpopo province South Africa, and the literature review will be based on studies already conducted relevant to the topic.

The discussion will be outlined under the following headings: cervical cancer, cervical cancer screening, knowledge of cervical cancer and cervical cancer screening, available screening tests (VIA, Pap smear and HPV test), risk factors, signs and symptoms treatment and prevention.

2.2 Cervical cancer

According to the American Cancer Society, (2015) cervical cancer starts in the cells lining the cervix, the lower part of the uterus. This is sometimes called the uterine cervix. The cervix connects the body of the uterus to the vagina. The part of the cervix closest to the body of the uterus is called the endo-cervix the part next to the vagina is called the exocervix. The two main types of cells covering the cervix are squamous cells and glandular cells. These two cells types meet at a place called the transformation zone the exact location.

2.2.1 Cervical cancer grading and staging

Carcinoma of the cervix is staged as a result of the following findings:

The following are the clinical stage of cervical cancer lesions according to the International Federation of Gynaecology and Obstetrics.

STAGE 0 Carcinoma in situ Intra epithelial carcinoma grades 1-3

STAGE 1A Microscopic disease confined to the cervix

STAGE 1B Disease confined to the cervix and greater than stage 1a

STAGE 2A Carcinoma extending beyond the cervix without parametrial involvement

STAGE 2B Parametrial involvement

STAGE 3A Extension to the pelvic side

STAGE 3B Extension to the pelvic wall with hydronephrosis or a non-functioning kidney

STAGE 4A Extension beyond the true pelvis to adjacent organs

STAGE 4B Spread to distant organs (Bower & Waxman, 2006).

2.2.2 Risk factors

According to American cancer society (2013), different cancers have different risk factor. The risks for cervical cancer include human papilloma virus infection smoking immunosuppression infection with chlamydia, diet low in fruits and vegetables being overweight, long term use of oral contraceptives, use of intrauterine device, having multiple full term pregnancies, being younger than 17 at first full term pregnancy, poverty and having a family history of cervical cancer.

Cervical cancer is associated with smoking, promiscuity, low socioeconomic status, the use of oral contraceptives, genital warts, herpes simplex virus2- infection and most particularly infection with Human Papilloma Virus 16 and 18. The average age of women with cervical cancer ranges from 35 to 44 years (Bower & Waxman, 2006)

2.2.3 Signs and symptoms

The American cancer society (2013) further identifies signs and symptoms of cervical cancer as abnormal vaginal bleeding such as bleeding after intercourse, bleeding after menopause, bleeding and spotting between periods and having menstrual periods that are longer or heavier than usual, bleeding after douching or after a pelvic examination may also occur. The second symptom is an unusual discharge from the vagina, the discharge may contain some blood and may occur between your periods or after menopause and the third sign is said to be pain during intercourse this signs and symptoms can also be caused by conditions other than cervical cancer. According to National Health Cervical Cancer Screening Programme (2006) these signs can be spotted early on and so it can be stopped before it even gets started.

The most common symptom of cervical cancer is post traumatic or inter-menstrual bleeding. The diagnosis is made by biopsy and the staging is clinical. (Sable, Sondak & Sussman, 2007).

2.2.4 Treatment

The treatment of cervical cancer depends on the stage of the disease (Bower & Waxman, 2006). Sable et al (2007) indicate that for any micro invasive lesions, surgical options include cold-knife conisation of the cervix, trachelectomy (surgical removal of the cervix) and simple hysterectomy. Stages 1A to 2A treatment is either a radical hysterectomy or bilateral pelvic lymphadenectomy or external beam pelvic radiation and intracavitary implants with concurrent chemo sensitisation. Radical trachelectomy with pelvic lymphadenectomy may also be selected for patients with cancer stages 1A and 1B and for more advance stages of the disease treatment should consists of a combination of chemotherapy and radiation.

2.2.5 Prevention

Primary prevention of cervical cancer can be achieved through the use of vaccine. HPV vaccination is still in its infancy with the first vaccine having been approved in 2006. However, prevention of HPV infection through vaccination is the most effective primary prevention method available. The two vaccines are currently available: Gardasil and Cervirax. Both vaccines require three doses given over six months. The vaccine has been proven to remain effective for at least five years but may prove to be effective for longer (SALC, 2012). The department of health in South Africa is currently rolling out the vaccine to schools around the country. The recent rollout for the vaccine in Limpopo Province took place from the 11 August to the 4th of September 2015 (Capricorn voice, August/September 2015)

2.3 Cervical cancer screening

Cervical cancer can often be prevented. The signs that it may develop can be spotted before it even gets started (National Health Service: Cancer Screening Programme).

According Cervical Cancer and Human Papilloma Virus: A guideline for tests and screening (2010), screening programmes aim to reduce mortality and morbidity from cervical cancer and decrease the number of patients suffering from cervical cancer. Through screening the existence of precursor lesions of the cervix can be detected and managed. internationally in population where coverage is wide enough to reach more than 70% of women the maximum impact of decreasing the incident of cervical cancer and cervical cancer deaths become apparent and reaches a plateau at 84% coverage it is expected that the occurrence of cervical cancer can be reduced by 70% or more under such circumstances.

2.3.1 Pap smear

The Pap smear is a screening tool that looks for changes in the transformation zone of the cervix, which most often are caused by HPV. It is also known as Papaniculou smear and its further described as a microscopic examination of cells scraped from the cervix and used to detect cancerous or precancerous conditions of the cervix or other medical conditions it was named after Dr.George Papaniculou, who first

described it in 1928 and since its introduction the pap smear has helped reduce cervical cancer incidence and mortality rates by 75% (Mahta, Vasanth & Balachandron, 2009).

2.3.2 Visual inspection with acetic acid (VIA)

Visual inspection with acetic acid (VIA) it's a simple, inexpensive test with moderate sensitivity and specificity for screening that can be combined with simple treatment procedures for every cervical cancer lesions (Poli,Bidinger & Gowrishankar,2015). Poli et al further indicated that via is feasible in many low resource areas where it is difficult to sustain high quality cytology programmes and health workers or nurses can be trained as test providers. The test result are available immediately

Recent studies have demonstrated that VIA is an alternative sensitive screening method. It is cheap and non-invasive and can be done in low level health facility like a Health Centre, and more importantly VIA provides instant results (WHO, 2012).

2.3.3 Human Papilloma Virus (HPV) testing

HPV testing is significantly more sensitive than cytology to predict cervical cancer and its precursors (Botha,Cooreman,Dreyer,Lindique,Mouson,Guidozzi,Koller, Smith Hoosen, Marcus, Dyson, Moodley & Soeters,2010).According to Botha et al, the sensitivity of the test approaches 100% due to the ability of the PCR to detects HPV DNA even when present in minute quantities, and detects the most common high risk HP virus present in the sample.

2.3.3.1 Human Papilloma Virus

The Papilloma viruses are non-enveloped, icosahedral, double stranded DNA viruses. Around 100 genotypes have been identified and more than thirty of these infect the female genital tract. Some genotypes are associated with benign lesions, such as warts (HPV 6 and 11) whilst others, known as high risk genotypes are associated with invasive cancer (HPV 16.18,31,33,45,51,52,56 and 59. (Bower et al, 2006). According to American Cancer Society, 2015 the papilloma virus is attracted to and is able to live only in certain cells called squamous epithelial cells. These cells are found on the surface of the skin and on moist surfaces called mucosal surfaces

like: the vagina, anus, cervix, vulva (around the outside of the vagina), the fore skin and urethra of the penis, inner nose, mouth, throat, trachea, bronchi and the inner eyelids.

Denny (2007) Head of Department of obstetrics and Gynaecology, Groote Schuur Hospital and University of Cape Town performed a randomised trial in Cape Town South Africa. She evaluated three methods of screening: screening with VIA, screening with VIA followed by Crytherapy, HPV DNA followed by cryotherapy. The HPV DNA followed by Cryotherapy was found to be twice as effective in reducing high grade lesions as compared to screening with VIA followed by cryotherapy.

2.4 Knowledge of cervical cancer and its screening

2.4.1 Knowledge of cervical cancer

Different studies have been conducted to determine knowledge regarding cervical cancer and its screening among women. A study on knowledge of cervical cancer awareness and attitude to screening among patients at a cytology clinic at the University of Tennesse in the United States of America was done (Akinlaja & Anorlu, 2014). The objectives of the study were to determine the awareness of cervical cancer and the screening programme at the institution and highlight the role of enlightenment campaigns. The results indicated that even though the study was conducted amongst patients specially referred to cytology clinic for pap smear test, knowledge of the procedure and the reasons for it was low with just 29% having insight into what it is meant for and about 26% having some knowledge about cervical cancer itself and furthermore there was an indication that age and marital status did not influence the respondent's knowledge but the level of education and occupation were found to be positively influencing their knowledge of cervical cancer and their acceptance of Pap test. The author concluded that adequate health information and counselling on cervical cancer and regular pap testing still need to be emphasized in developing countries so as to reverse the morbidity associated with cervical.

Wong,Wong,Low,Khoo & Shuip (2009) revealed in his study that many women did not have clear understanding of the meaning of abnormal cervical smear, and the

need for the early detection of cervical cancer. The overall results indicated that lack of knowledge on cervical cancer and Pap smear tests was found among respondents. The study concurs with the findings of a study done in Qatar conducted by Almar, Asseel, Alkalaf & Ismail (2008) to determine knowledge attitude and practices regarding cervical cancer and its screening which revealed that knowledge and practices was inadequate among women.

Another study done by Abdul-Aziz (2012) at the University of Science and Technology Hospital Sana, at least 80,6% (228) participants had various levels of knowledge about cervical cancer,42,3% knew that viral infection by HPV may be the cause of cervical cancer. With regard to clinical presentation of the cervix, women knew that vaginal bleeding 77, 2%, pelvic pain 43, 9%, menstrual disturbance 35, 1%, was the commonest. As for prevention of cervical cancer 7% had some knowledge, 59%had an idea about periodic cervical cancer screening, while only 18% knew the HPV vaccine. Women in this study had a satisfactory knowledge about cervical cancer, its risk factors, clinical presentation, prevention, however their knowledge on management of cervical cancer was found to be false (Aswathy, 2012).

In Nigeria a study aimed to ascertain the knowledge and attitude of urban and rural dwellers to cervical cancer and HPV in Gwagwalada area. About 400 participants aged 15 and 45 years were selected the results indicated a low level of awareness about HPV and cervical cancer of which majority felt it could not be prevented. Although awareness of STDs was high in both urban and rural dwellers condom use was very low. The study underscores the need for a well-planned and implemented health communication and education programme on STI and HPV and cervical cancer in Nigeria (Nnodu,Erinosho,Jamda & Oloniyi, 2010).

2.4.2 Knowledge of cervical cancer screening

In a study conducted in East Central England, to assess the extent and accuracy of women's knowledge of cervical cancer, risk factors and efficacy of National Screening Program. The results indicated that women typically possess only a partial picture of risk factors and overestimates both incidence of cervical cancer and efficacy of screening (Phillip, Avis & Whynes, 2005).

In Canada a study on cervical cancer screening among immigrant women in Ontario: the influence of acculturation was conducted, to explore whether there are cervical cancer screening differences among immigrants and non-immigrant women, to explore cervical cancer screening decision making among immigrant women and to explore the influence of acculturation on cervical cancer screening. The study provided insight into inequalities that still exist in terms of, who is participating in cervical cancer screening as well as the factors involved in screening decision making and the relationship between them. The study provided an updated overview of Pap test participation in Ontario as well as advancing our understanding of the influence of factors on screening decision making among immigrant women. The study clarifies the fact that a targeted effort has to be directed towards those less likely to get a Pap test (Nour, 2013).

Beining (2012) reported in his study done to explore the role of awareness and knowledge of cervical cancer as a barrier to screening participation among urban women and to identify potential impact of increased cervical cancer awareness and knowledge of screening attitudes in Tamil Nadu, India. The results suggested that the majority of women were not aware of screening. The results also suggested that providing women with information about cervical cancer has the potential to change the attitudes of a significant portion of women who were previously unreceptive to screening. Availability, accessibility affordability and awareness are identified in literature as barriers for women to undergo cervical cancer screening in low resource communities (Saltyal, 2013).

In Africa, a study was conducted in Addis Ababa, Ethopia, Tikur Anbessa Hospital, St Paul Hospital and Ghandi Memorial Hospital on clients attending emergency and regular outpatient department (OPD), Ante natal, Post-natal, Family planning and referral clinic. At the three hospitals, the results revealed that most respondents (81%) had never heard of Pap smear screening, the source of information for those who had heard of this test were health institutions for 65.4% of the respondents. Women who had heard about Pap smear screening were younger than those who had never heard of it. Only 6.5% of all the respondents had ever had a pap smear test, the reasons given for not having the test were: no gynaecological symptoms (41.2%), don't know the place where it is done (32.4%)wait till older (14,7%),

consider it was not important (11,8%). For those patients who had ever had a test the indication for the test were Doctors/Nurse consultation 72.2% and personal initiative 20.7%. Women who had a Pap smear test had higher level of education than those who never had a Pap smear. Almost all the respondents were willing to undergo the screening test in future (Yifru & Asheber, 2008)

In a study conducted by James (2011), in Songea Urban Ruvuma in relation to the knowledge attitude and perceived barriers towards screening for pre-malignant cervical lesions among women aged 18 years and above. The results revealed that generally the knowledge was poor, the attitude was positive to majority of respondents but practices were found to be very poor. This report concur with a cross sectional study aimed at determining the knowledge and practice of cervical cancer screening among female secondary school teachers in Nnewi North, Local Government, South Eastern Nigeria conducted by Ubajaka Ukegbu Llikannu Ibeh Onyeonoro & Ezeanyim (2015), the results revealed a very low uptake of pap smear, though the level of awareness was reported to be high, which in turn is in contrast with the findings of Yashimo ,Ohta ,Kawashima ,Wada, Shimisa Sakagushi Okada & Aizawa (2012), where the results indicated a significant association between knowledge about cervical cancer and screening adherence among Japanese nurses.

The study aimed at seeking to assess the knowledge, level of perception and the attitude of female staff and students of Niger Delta University in Nigeria towards cervical cancer screening was conducted. The outcome of the study showed that 278 (72%) of the respondents were aware of cervical cancer while 182 (50%) were aware of cervical cancer screening.100 (41.2%) of the respondents new about Pap smear as the most popular screening and 8.5% student respondents and 16.3% staff respondents wrongly believed that blood test is used for cervical cancer screening (Owoeye & Ibrahim 2013).

Hami (2012) conducted a study in Malawi and the purpose of the study was to identify factors with emphasis on knowledge that were associated with the intensions to be screened for cervical cancer among Malawian women aged 42 and older. The study also attempted to identify factors identified from nurses and midwives' perspectives as influencing the intention to utilize cervical cancer screening by

women of the same group. The result indicated that knowledge that cervical cancer screening could detect this cancer at an early stage, embarrassment, stigma, social support, financial costs, traditional practices and available sources of information influenced women's intentions to be screened for cervical cancer.

In Zimbabwe a study was done with the aim of estimating the proportion of rural females who had received cervical screening and to seek knowledge, beliefs and demographics that influence cervical screening and predict cervical screening accessibility (Mupepi,Samselle,Timothy &Johnson, 2011).The results revealed that females who were financially dependent on their husbands and females in mining villages were 44.7% more likely to access cervical cancer screening than those traditional rural village women and females in resettlement villages were 20% less likely to access cervical screening than those in traditional rural reserve villages. Whilst Balogun, Odukuya,Oyedira & Ujomu (2012) in a study to identify factors influencing cancer screening uptake among women greater than 18 years attending Mahalapye district hospital in Botswana identified the main sociodemographic characteristics significantly associated with perceived susceptibility as employment, monthly income and residential area. Perceived severity was associated with monthly income and residential area.

A qualitative, explorative description and contextual study using interviews and field notes, investigated the implementation of cervical cancer screening by private medical practitioners in Soshanguve, South Africa in 2010.Four barriers to the implementation of cervical cancer screening programme among private medical practitioners were identified as age and gender of medical practitioners, patients age, few opportunities for private medical practitioners to conduct Cervical Cancer Screening tests, failure of medical practitioners to inform patients and high costs of screening (Mookeng, Mavundla & Macfarland, 2010). At Mongosuthu University of Technology, Kwazulu Natal, a study was conducted among female under-graduate students to assess the knowledge of the risk factors associated with and detection methods of cervical cancer in 2008 among these female university students. The students were found to be too young to can be included in the screening programme that begins at 30 years. While treatment and management are not required at University, the university is faced with a task of informing the students about the risk

factors for cervical cancer and strategies to prevent transmission of HPV virus and in turn the students will inform their older female's relatives and friends who are legible for Cervical Cancer Screening with the encouragement of the university (Hogue & Hogue, 2008).

2.5 Conclusion

This chapter presented the literature review on the knowledge of cervical cancer and its screening nationally and internationally. The chapter further expatiate on what cervical cancer is, cervical cancer grading and staging, signs and symptoms, treatment of cervical cancer and the different types of cervical cancer screening in an attempt to emphasize the importance of early detection and screening.

CHAPTER 3: RESEARCH DESIGN AND METHODS

3.1 Introduction

In this chapter, the research design and methodology, study site, population sampling, inclusion and exclusion criteria, data collection instrument, data analysis are discussed. Data was collected by means of a structured questionnaire and strategies were employed to ensure the reliability and validity of the research process.

3.2 Research Design

3.2.1 Quantitative Research

Quantitative research method is a formal objective systematic process in which numerical data are used to obtain information (Burns & Grove, 2011). A quantitative method was used in this study and data gathered to investigate the knowledge of women with regard cervical cancer and its screening was descriptive in nature.

3.2.2 Descriptive Design

A descriptive, cross-sectional design was used in this study to enable the researcher to gather information from a representative sample of the population using questionnaires and examining data at one point in time, data was collected on one occasion only with different respondents rather than on the same participants at several points in time (Brink et al, 2012).

3.3 Study Site

The study was conducted at Mankweng Hospital Out-Patient Department which provides treatment and care for all patients with general conditions, Mankweng Hospital is situated 50 km from Polokwane City, and 3km from University of Limpopo.

3.4 Population

Population is the entire group of persons or objects that is of interest to the researcher in other words that meet the criteria that the researcher is interested in studying (Brink et al, 2012).The study was conducted in Mankweng Hospital General outpatient department. About 440 patients per month are seen in this department and the Slovin's formula was used to determine the sample size. In this study the population comprised of all women aged 30 years and above attending Mankweng Hospital General Out Patient Department.

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 populations of interest. (Brink et al, 2012).The sample for this research was 206 and a simple random sampling was used. A register was used to select respondents according to age and all woman registered for general outpatient were recorded numerically from 1 up to 20 for that particular day whereby on some days the number was increased to 25 depending on the time available for the researcher and every second woman above the age of 30 was chosen as a participant.

3.6 Inclusion Criteria

- Woman aged 30 years and above in the Out-Patient Department in Mankweng hospital for consultation for any general condition in the General Out Patient Department in Mankweng Hospital.
- Women who have given consent for participation in the study.

3.7 Exclusion criteria

- Women below the age of 30.
- Women who did not give consent.
- All male patients and paediatric patients.

3.8 Data collection

According to Polit & Beck (2012) data collection is the gathering of information to address a research problem in this study, the questionnaires were distributed by the researcher to the respondents after an informed consent was obtained and this made it possible for the researcher to provide clarification and assistance where necessary.

3.8.1 Questionnaire

The questionnaire consisted of an introductory paragraph which briefly indicated the name, surname and the status of the researcher and where the researcher is coming from, it also explained the reason behind the questionnaire, but basically the questionnaire consisted of three sections.

The questionnaire was translated to Sepedi for those who do not understand English. Each question was scored using 3 point Likert scale from agree, neutral and disagree.

Section A: This comprised of the sociodemographic data of the respondents. Items such as age, educational level, employment and marital status of the respondents were included because this factors can influence the knowledge of the respondents with regard financial geographical, cultural as well as accessibility to information.

Section B: Aimed at eliciting knowledge with regard cervical cancer and included closed ended questions depicting the prevention, risks and signs and symptoms related to cervical cancer.

Section C: This consists of questions related to cervical cancer screening and included questions depicting the knowledge on who should screen, how much the screening costs and how the screening is done to clearly indicate whether the respondents know the screening test or not.

The researcher was able to collect data from 20 respondents per day. For those who could not read and write the researcher conducted a structured interview.The researcher visited the hospital every day from Monday to Friday and it took the researcher five (5) weeks to complete the questionnaires.

The presence of the researcher for data collection had a positive impact on the responds rate and a total number of 206 questionnaires were completed and resulted in 100% response rate.

3.9 Data analysis

3.9.1 Descriptive statistical analysis

Data obtained from the questionnaires was summarized, analyzed, interpreted and presented by making use of descriptive statistics Tables, charts, graphs and percentages were used in the presentation of the findings. The mean, standard deviation, minimum and maximum values for all scaled questions were also computed and used in the explanation of the findings.

3.9.2 Statistical Procedures

This study used SPSS as the statistical software for data analysis. According to Coakes, Steel & Ong (2009) SPSS is software for performing statistical procedures in the social sciences field. SPSS is among the most widely used program for statistical analysis in social sciences. It is a complete statistical package that is based on a point and click interface. SPSS has almost all statistical features available and widely used by researchers to perform quantitative analysis.

3.10 Reliability

Reliability is concerned with the consistency, stability and repeatability of the informants accounts as well as the researcher's ability to collect and record information accurately (Creswell, 2009). The researcher was available to distribute research questionnaires herself. Several steps were taken to ensure that only relevant information is collected during the development of the questionnaire. The questionnaire was checked by the supervisor the statistician as well as the Head of Public Health Department. Reliability was measured using Cronbach's Alpha.

3.11 Validity

Validity is concerned with the accuracy and truthfulness of scientific findings (Burns & Grove 2011).The questionnaire was checked by the statistician to verify that questions address the objectives of the study. The assistance given to illiterate participants by reading the questionnaire to them and the presence of the researcher during completion of questionnaires made provision for consistency and enhancement of the validity of the study. The questionnaire was translated into Sepedi (see appendix 2) for the respondent who could not understand English.

3.12 Pilot study

The questionnaire was pilot tested using 20 respondents at a clinic offering the same services as Mankweng Hospital in a village outside the hospital to enable the researcher to identify gaps.

3.13 Ethical Considerations

Ethical clearance was obtained from TREC (Turfloop Research Ethics Committee). Permission to undertake the study was granted by the Department of Health, Limpopo Province. A further permission from Mankweng Hospital was granted as well as permission from Primary Health Care, District Office Limpopo Province for Pilot testing of the study at Makanye Clinic was granted.

3.13.1 Informed consent

The respondents were given thorough and truth full information about the purpose of the study namely to collect information on knowledge among women with regard cervical cancer and its screening at Mankweng Hospital. The informed consent was obtained before the respondents can be issued with a questionnaire.

3.13.2 Anonymity

Anonymity of the respondents was maintained at all times by not using any identification or personal information in the questionnaire. In this study the respondents were not required to write their names on the questionnaire provided.

3.13.3 Respect

The researcher ensured that there were no risks attached to respondent's participation in the study. Participation was voluntary and the respondents were given the information that they have the right to refuse participation in the study and that refusal to participate will not in any way influence any future relationship with the interviewer. The respondents were further assured that their participation will never result in any cost to them.

3.13.4 Confidentiality

Confidentiality of the respondents was protected and no personal information such as name and surnames were requested. Respondents were each given a questionnaire individually to ensure privacy and as respect to their dignity.

3.14 Conclusion

A description of the research design and methodology that were used to address the research objectives were provided in chapter 3. The research used quantitative descriptive approach as guidance to this research. Data collection was done using questionnaire and descriptive statistics were used to analyse data. Issues with regard validity and reliability were addressed and ethical principles were adhered to.

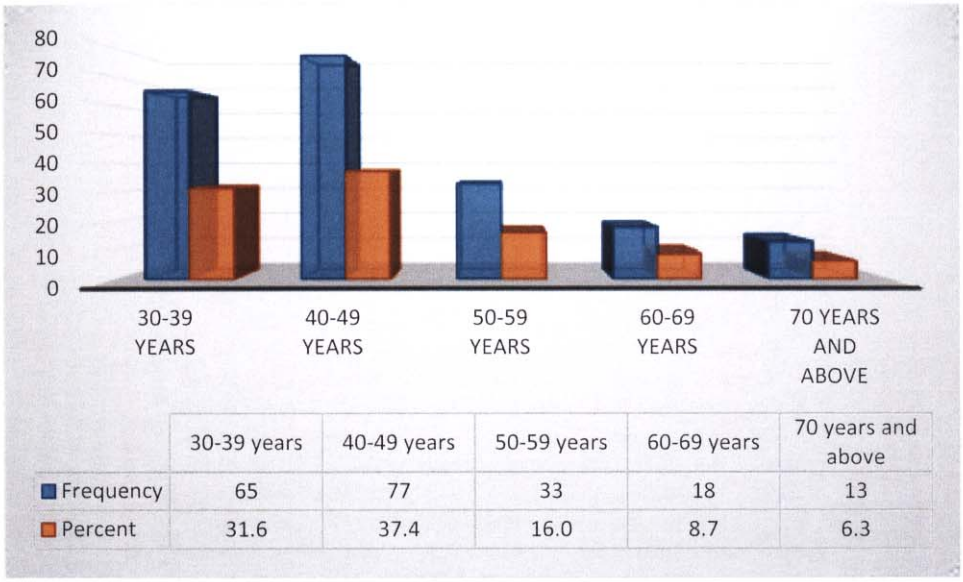
CHAPTER 4: RESULTS

4.1 Introduction

The previous chapter discussed how the research was undertaken. The purpose of this chapter is to present and interpret the empirical findings of this research. In interpretation, the immediate results are translated into integrated and meaningful statistics and findings. The findings are proved to be related to the objectives of the research. The success of this study is assured through both the data analysis and interpretation which are carried out in an orderly manner.

4.2 Socio demographic information

The researcher required the respondent's personal information, and that included age, education, employment, marital status and religion.



	30-39 years	40-49 years	50-59 years	60-69 years	70 years and above
Frequency	65	77	33	18	13
Percent	31.6	37.4	16.0	8.7	6.3

Figure 4.1: Age of respondents in years

4.2.1 Age of respondents

The above Figure reflects that 65 (31.6%) of respondents were between the ages of 30 – 39 years; 77 (37.4%) between the ages of 40 – 49 years; 33 (16.0%) between 50-59 years; 18 (8.7%) between 60-69 years and lastly, 13 (6.3%) were more than 70 years of age.

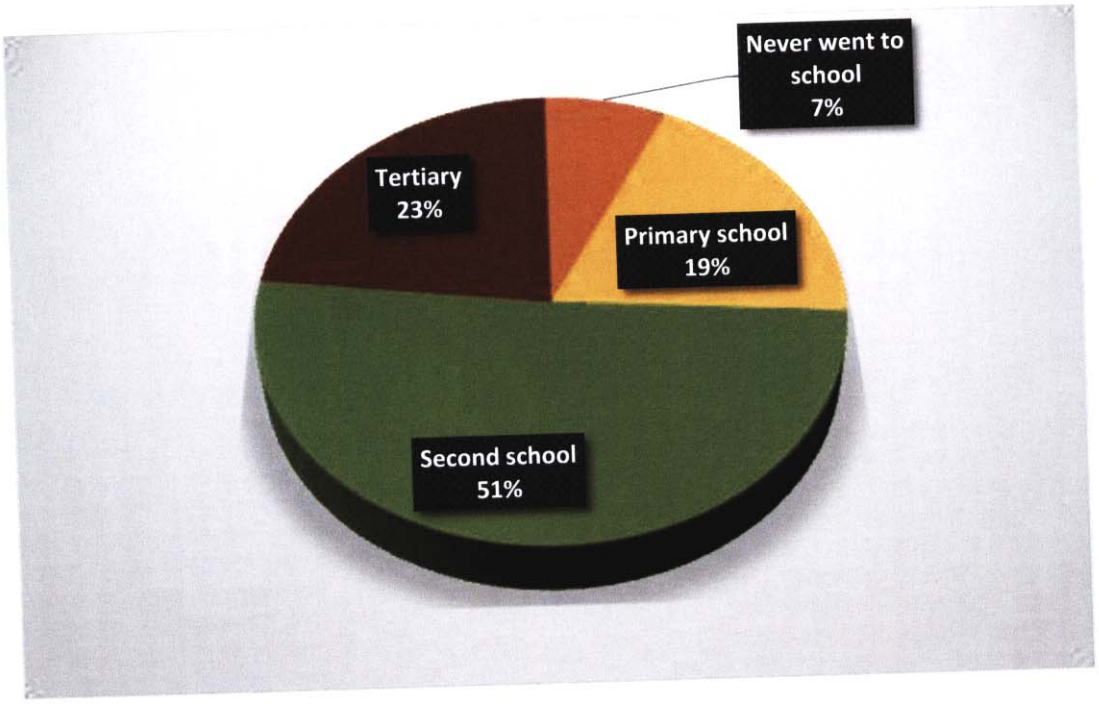


Figure: 4. 2 Level of education

4.2.2 Level of Education

The above pie chart shows that 15 (7%) out of 206 respondents, never went to school, 39 (19%) out of 206 respondents had primary education, 105 (51%) out of 206 respondents had secondary education and 41 (23%) out of 206 respondents had tertiary education.

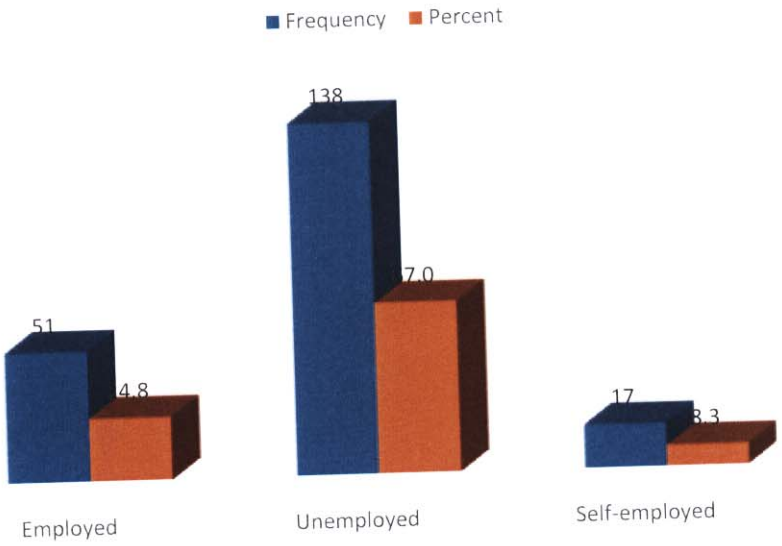


Figure: 4.3 Employment status

4.2.3. Employment status

Figure 3 above indicates that of the 206 respondents 51 (24%) are employed, 138 (67%) of the respondents are unemployed and 17 (8.3%) of the respondents are self-employed. Employment means that the participant is working for a certain organisation or department. Self- employed refer to those people who are either selling goods or owning a company or a shop.

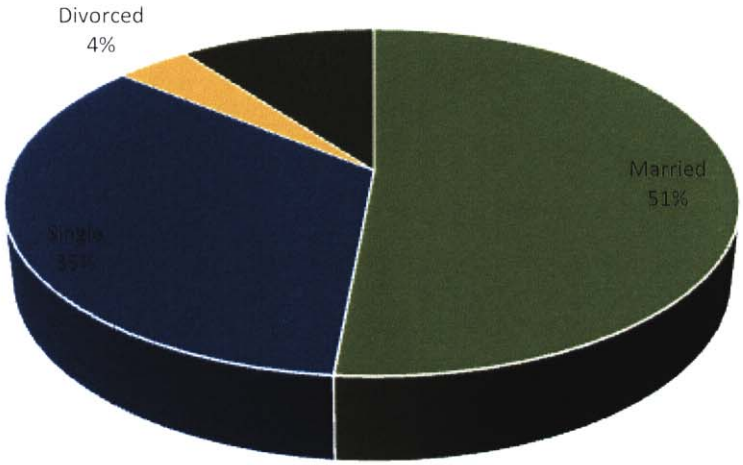


Figure: 4. 4 Marital Status

4.2.4. Marital Status

The pie chart provided above illustrate that, of the 206 respondents 8 (4%) are divorced, 106 (51.5%) are married, 71 (34.5% are single 21 (10.2%) are widowed.

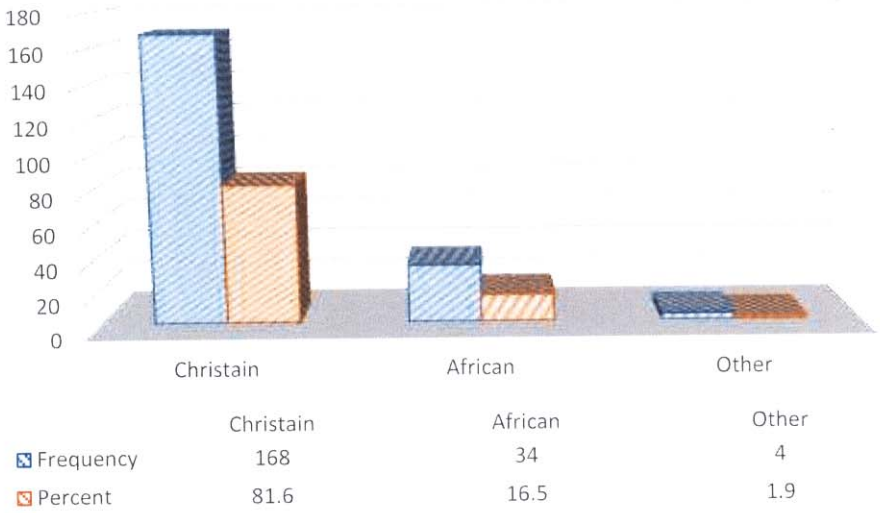


Figure: 4.5 Religious status

4.2.5 Religious status

The bar graph as indicated above shows that from the 206 respondents, 168 (81.6%) of the respondents are Christians, 34 (16.5%) are Africans and 4 (1.9%) falls under other religious denominations.

4.3 Knowledge regarding cervical cancer and its screening amongst women

This section reveals the responses on a question-by-question basis. Results from all sections of the questionnaire are also compared to existing empirical evidence in the next chapter to assess consistency.

4.3.1 Knowledge of cervical cancer

4.3.1.1 *Respondent's knowledge regarding cervical cancer.*

For the researcher to determine knowledge of cervical cancer and its screening, questions were asked to the respondents. The respondents were expected to choose between agree, neutral and disagree. Table 4.1 below, indicate that majority of respondents193 (67.6%) agreed that cervical cancer is preventable, cervical cancer is curable, 126 (61.2%) and cervical cancer is a disease whereby the cells on the mouth of the womb grow out of control, 139 (67.5%). About 83 (40.3%) of the

respondents agreed that women can be immunised from cervical cancer whereas 66 (32%) remained neutral. Total of 57 (27.7%) disagreed with the statement.

Table: 4.1 Knowledge regarding cervical cancer

QUESTION	AGREE	NEUTRAL	DISAGREE
Cervical cancer is preventable	193(76%)	50(24.3%)	17(8.3%)
Cervical cancer is curable	126(61.2%)	61(29.6%)	19(9.2%)
Cervical cancer is a disease whereby the cells on the mouth of the womb grow out of control.	139(67.5%)	59(28.6%)	8(3.9%)
Women can be immunised from cervical cancer	83(40.3%)	66(32%)	57(27.7%)

4.3.1.2 Respondent's knowledge of risk factors for cervical cancer

About 149 (72, 3%) respondents in Table 4.2 below agreed that women who start having sexual intercourse at an early age are at risk of cervical cancer. Women with more than one sexual partner were regarded as being at risk of cervical cancer by 145 (70.4%) respondents. About 80 (38.8%) of respondents agreed that women who are having more than five children are at risk of developing cervical cancer whereas 76 (36.9%) remained neutral. A total of 136 (66%) agreed that women experiencing increased vaginal discharge are at risk too.

Table: 4.2 Knowledge regarding risks for cervical cancer

QUESTION	AGREE	NEUTRAL	DISAGREE
Women who start having sexual intercourse at an early age are at risk of cervical cancer	149(72.3%	37(18%)	20(9.7%)
Women with more than one sexual partner are at risk of developing cervical cancer	145(70.4%)	43(20.9%)	18(8.7%)
Women having more than five children are at risk of developing cervical cancer	80(38.8%)	76(36.9%)	50(24.3%)
Women experiencing increased per vaginal discharge are at risk of developing cervical cancer	136(66%)	54(26.2%)	16(7.8%)

4.3.1.3 Average percentage of responses of knowledge regarding cervical cancer

In the Table below the results indicates the average percentage of the respondents with regard knowledge of cervical cancer. Out of the 206 respondents, 91 (44.2%) had adequate knowledge and 91 (44.2%) had inadequate. Only 24 (11.7%) respondents were not sure about the knowledge with regard cervical cancer.

Table: 4.3 Average percentages of knowledge regarding cervical cancer

	Frequency	Per cent
Adequate knowledge	91	44.2
Not sure	24	11.7
Inadequate knowledge	91	44.2
Total	206	100.0

4.3.2. Respondent's knowledge of cervical cancer screening

4.3.2.1. Knowledge regarding indications for cervical cancer screening

Table 4.4 below indicates the symptoms necessary to compel an individual to go for cervical cancer screening. About 145 (70.4%) respondents agreed that women experiencing post coital bleeding should be screened for cervical cancer whereas 156 (75.7%) respondents agreed that women experiencing per vaginal bleeding should be encouraged to do cervical cancer screening. About 134 (65%) of the respondents indicated that painful intercourse is one of the symptoms of cervical cancer and 120 (58.3%) of respondents disagreed with the statement that cervical cancer screening is done to women who are unable to bear children. Most women, 126 (61.2%) disagreed with the statement that cervical cancer screening is only done to women who have been sexually active for more than ten years, whereas 132 (64.1%) respondents agreed that cervical cancer screening is done at government hospitals/clinics/private hospitals and 142 (68.9) agreed that a woman should start cervical cancer screening when she is sexually active. A total of 181 (87.9%) agreed that every woman is entitled for a free pap smear at government hospitals and clinics.

Table: 4.4 Knowledge regarding indications for cervical cancer

QUESTION	AGREE	NEUTRAL	DISAGREE
Women experiencing post coital bleeding should be screened for cervical cancer	145(70.4%)	46(22.3%)	15(7.3%)
Women experiencing per vaginal bleeding should be encouraged to do cervical cancer screening	156(75.7%)	36(17.5%)	14(6.8%)
Painful intercourse is one of the symptoms of cervical cancer	134(65%)	53(25.7%)	19(9.2%)
Cervical cancer screening is done to women who are unable to bear children	30(46%)	56(27.7%)	120(58.3%)
Cervical cancer screening is done to women who have been sexually active for more than ten years	40(19.4%)	40(19.4%)	126(61.2%)
Cervical cancer screening is done at government hospitals/clinics/private hospitals	132(64.1%)	65(31.1%)	54(26.2%)
A woman should start cervical cancer screening when she is sexually active	142(68.9%)	34(16.5%)	30(14.6%)
Every woman is entitled for free pap smear at government hospitals/clinics	181(87.9%)	21(10.2%)	4(1.9%)

4.3.2.2. Knowledge about the procedure for cervical cancer screening

Table 4.5 below indicate the participant's knowledge regarding the procedure for cervical cancer screening. Majority of women 90 (43.7) remained neutral about cervical cancer screening as more accurate when done during the time when the woman is having menstrual periods while 77 (37.4%)agreed with the statement. Most women 88 (42.7%) agreed on cancer screening as painful while 65 (31.1%) remained neutral on this statement About 111 (53.9%) agreed that a speculum is gently inserted into the vagina to hold it open for good visibility of the cervix and 69

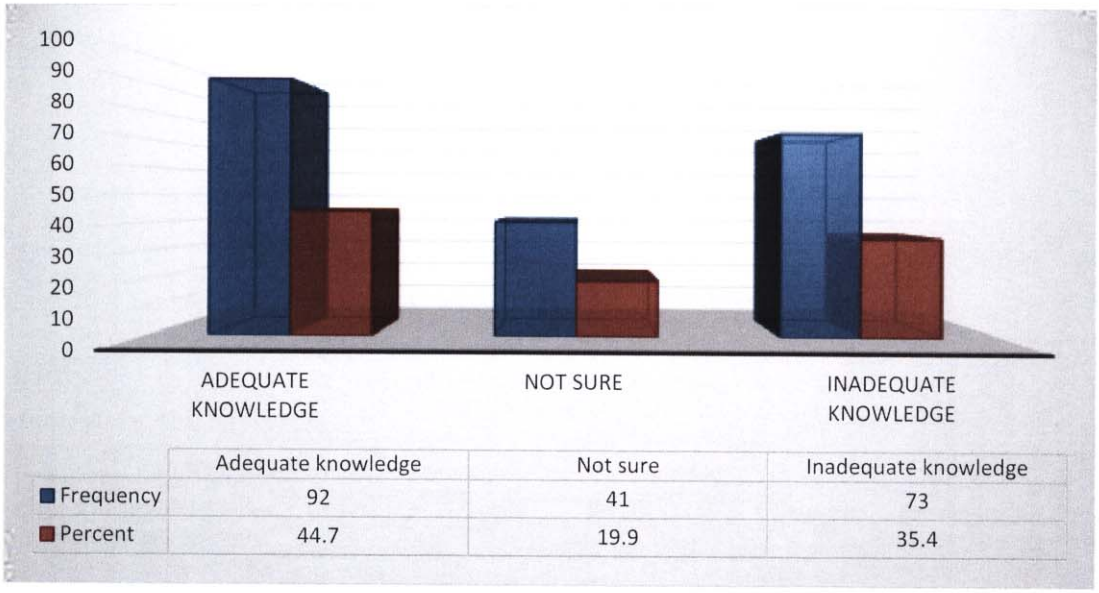
(37.5%) remained neutral A total of 167 (81.1%) agreed that pap smear is one of the screening tests for cervical cancer.

Table 4.5 Knowledge about the procedure for cervical cancer screening

QUESTION	AGREE	NEUTRAL	DISAGREE
Cervical cancer screening is more accurate when done during the time when a woman is having menstrual periods	77(37.4%)	90(43.7%)	39(18.9%)
Cervical cancer screening is painful	88(42.7%)	65(31.1%)	54(26.2%)
A speculum is gently inserted into the vagina to hold it open for good visibility of the cervix	111(53.9%)	69(33.5%)	14(6.8%)
Pap smear is one of the screening tests for cervical cancer	167(81.1%)	24(11.7%)	15(17.3%)

4.3.2.3 Average percentage of responses of knowledge regarding cervical cancer screening

The figure below shows the results of the average percentages of responses, from the 206 respondents 92 (44.7%) had adequate knowledge, 73 (35.4%) had inadequate knowledge and 41 (19%) were not sure with regard knowledge of cervical cancer screening.



	Adequate knowledge	Not sure	Inadequate knowledge
Frequency	92	41	73
Percent	44.7	19.9	35.4

Figure: 4.6 Average percentages of responses of knowledge regarding cervical cancer screening

4.3.2.4. Reliability Statistics

Alpha is an important concept in the evaluation of assessments and questionnaires. Assessors and researchers should estimate this quality to add validity and accuracy to the interpretation of their data. It was developed by Lee Cronbach in 1951 to provide a measure of internal consistency of a test or scale. It is expressed as a number between 0 and 1. (Tavakol & Dennick, 2011)

The Cronbach's alpha indicator that was used to test for reliability indicates the overall reliability of a questionnaire. According to Field (2009), the values around 0.7 and 0.8 are good for reliability tests. Reliability tests performed yielded the results that are presented in Table 4.6.

The Table below indicates the reliability results of knowledge with regard cervical cancer having 10 items and a Cronbach's alpha of 0.599, knowledge of cervical cancer screening with 13 items and a Cronbach's alpha of 0.536. The overall items were 23 and the overall Cronbach's alpha was 0.659.

Table: 4.6 Cronbach's Alpha

Components	N of Items	Cronbach's Alpha
Knowledge of cervical cancer	10	0.599
Knowledge of cervical cancer screening	13	0.536
Overall	23	0.659

4.4 Association between socio demographic factors and knowledge of cervical cancer

4.4.1 Age and knowledge of cervical cancer

Table 4.6 below indicate that, of the 65 (31.6%) respondents aged between 30 and 39, 28 (13.6%) had adequate knowledge, 31 (15.0%) had inadequate knowledge and 6(2.9%) were not sure with regard the knowledge of cervical cancer. For the 77 (37.4%) respondents aged between 40 and 49, 32 (15.5%) had adequate knowledge 36 (17.5%) had inadequate knowledge and 9 (4.4%) were not sure of the knowledge with regard cervical cancer. From the 33 (16.0%) respondents aged between 50 and 59, 17 (8.3%) had adequate knowledge, 10 (4.9%) had inadequate knowledge and 6 (2.9%) were not sure with regard knowledge of cervical cancer. From the 18 (8.7%) respondents aged between 60 and 69, 7 (3.4%) had adequate knowledge, 9 (4.4%) had inadequate knowledge and 2 (1.0%) were not sure about the knowledge of cervical cancer. From the 13 (6.3%) respondents aged 70 years and above 7 (3.4%) had adequate knowledge, 5 (2.4%) had inadequate knowledge and 1 (0.5%) were not sure about cervical cancer.

Table:4.7 Age and knowledge of cervical cancer

			Knowledge of cervical cancer			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Age	30-39 years	Count	28	6	31	65
		% of Total	13.6%	2.9%	15.0%	31.6%
	40-49 years	Count	32	9	36	77
		% of Total	15.5%	4.4%	17.5%	37.4%
	50-59 years	Count	17	6	10	33
		% of Total	8.3%	2.9%	4.9%	16.0%
	60-69 years	Count	7	2	9	18
		% of Total	3.4%	1.0%	4.4%	8.7%
	70 years and above	Count	7	1	5	13
		% of Total	3.4%	0.5%	2.4%	6.3%
Total		Count	91	24	91	206
		% of Total	44.2%	11.7%	44.2%	100.0%

The Table below indicate that when using a chi square the P value is equals to 0.798 which is more than the required p value of 0.05

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.613[a]	8	.798
Likelihood Ratio	4.624	8	.797
Linear-by-Linear Association	.583	1	.445
N of Valid Cases	206		

4.4.2 Education and Knowledge of Cervical Cancer

The Table below indicate the association between education and knowledge of cervical cancer. Out of 15 (7.3%) respondents who never went to school, 5 (2.4%) had adequate knowledge, 6 (2.9) had inadequate knowledge and 4 (1.9%) were not sure about knowledge of cervical cancer. From 39 (18.9%) respondents who went up to primary school level, 20 (9.7%) had adequate knowledge and 16 (7.8%) had inadequate knowledge and 3 (1.5%) were not sure about the knowledge of cervical cancer. For the105 (51.0%) of the respondents who went up to secondary school, 44 (21.4%) had adequate knowledge 48 (23.3%) had inadequate knowledge and13 (6.3%) were not sure about the knowledge of cervical cancer. For the 47 (22.8%) respondents who went up to tertiary level with their education, 22 (10.7%) had adequate knowledge 21 (10.2%) had inadequate knowledge and 4 (1.9%) were not sure about the knowledge of cervical cancer.

Table: 4.8 Education and Knowledge of cervical cancer

			Knowledge of cervical cancer			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Education	Never went to school	Count	5	4	6	15
		% of Total	2.4%	1.9%	2.9%	7.3%
	Primary school	Count	20	3	16	39
		% of Total	9.7%	1.5%	7.8%	18.9%
	Second school	Count	44	13	48	105
		% of Total	21.4%	6.3%	23.3%	51.0%
	Tertiary	Count	22	4	21	47
		% of Total	10.7%	1.9%	10.2%	22.8%
Total		Count	91	24	91	206
		% of Total	44.2%	11.7%	44.2%	100.0%

The Table below indicate that when using chi square the P value is equals too0.528 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.121[a]	6	.528
Likelihood Ratio	4.469	6	.613
Linear-by-Linear Association	.008	1	.929
N of Valid Cases	206		

4.4.3. Employment and knowledge of cervical cancer

The Table below indicate that out of 51 (24.8%) respondents who are employed 25 (12.1%) had adequate knowledge, 20 (9.7%) had inadequate knowledge 6 (2.9%) were not sure about knowledge of cervical cancer. From 138 (67.0%) total of unemployed respondents, 60 (29.1%) had adequate knowledge 64 (31.1%) had in adequate knowledge and 14(6.8%) were not sure about the knowledge of cervical cancer and from 17 (8.3%) respondents who are self-employed 6 (2.9%) had adequate knowledge and 7 (3.4%) had inadequate knowledge and 4 (1.9%) were not sure about knowledge of cervical cancer.

Table: 4.9 Employment and knowledge of cervical cancer

			Knowledge of cervical cancer			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Employment	Employed	Count	25	6	20	51
		% of Total	12.1%	2.9%	9.7%	24.8%
	Unemployed	Count	60	14	64	138
		% of Total	29.1%	6.8%	31.1%	67.0%
	Self-employed	Count	6	4	7	17
		% of Total	2.9%	1.9%	3.4%	8.3%
Total		Count	91	24	91	206
		% of Total	44.2%	11.7%	44.2%	100.0%

The Table below indicate that when using chi square the P value is equals to 0.495 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.388[a]	4	.495
Likelihood Ratio	2.948	4	.566
Linear-by-Linear Association	.650	1	.420
N of Valid Cases	206		

4.4.4. Marital status and knowledge of cervical cancer

The Table below indicates that of the 106 respondents who are married, 47 (22.8%) had adequate knowledge, 48 (23.3%) had inadequate knowledge and 11 (5.3%) of the respondents were not sure about the knowledge of cervical cancer. From 71 (34.5%) respondents who are single, 30 (14.6%) had adequate knowledge, 31 (15.0%) had inadequate knowledge and 10 (4.9%) were not sure. From 8 (3.9%) respondents who were divorced, 3 (1.5%) had adequate knowledge and 4 (1.9%) had inadequate knowledge and 1(0.5%) were not sure about the knowledge of cervical cancer. From 21 (10.2%) respondents who were widowed, 11 (5.3%) had adequate knowledge, 8 (3.9%) had inadequate knowledge and 2 (1.0%) were not sure about knowledge of cervical cancer.

Table: 4.10 Marital status and knowledge of cervical cancer

			Knowledge of cervical cancer			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Marital Status	Married	Count	47	11	48	106
		% of Total	22.8%	5.3%	23.3%	51.5%
	Single	Count	30	10	31	71
		% of Total	14.6%	4.9%	15.0%	34.5%
	Divorced	Count	3	1	4	8
		% of Total	1.5%	0.5%	1.9%	3.9%
	Widow	Count	11	2	8	21
		% of Total	5.3%	1.0%	3.9%	10.2%
Total		Count	91	24	91	206
		% of Total	44.2%	11.7%	44.2%	100.0%

According to the Chi square below, the P value is equals to 0.970 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.327[a]	6	.970
Likelihood Ratio	1.308	6	.971
Linear-by-Linear Association	.222	1	.638
N of Valid Cases	206		

4.4.5. Religion and Knowledge of Cervical Cancer

The Table below indicate that out of 168 (81.6%) respondents who are Christians, 74 (35.9%) had adequate knowledge, 74 (35.9%) had inadequate knowledge and 20 (9.7%) were not sure about the knowledge of cervical cancer. From 34 (16.5%) the respondents who are African, 14 (6.8%) had adequate knowledge, 16 (7.8%) had inadequate knowledge and 4 (1.9%) were not sure about knowledge of cervical cancer. While from the 4 (1.9%) that belongs to other religions, 3 (1.5%) had adequate knowledge, (0.5%) had inadequate knowledge and 0 (0%) were not sure about the knowledge of cervical cancer.

Table: 4.11 Religion and knowledge of cervical cancer

			Knowledge of cervical cancer			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Religion	Christian	Count	74	20	74	168
		% of Total	35.9%	9.7%	35.9%	81.6%
	African	Count	14	4	16	34
		% of Total	6.8%	1.9%	7.8%	16.5%
	Other	Count	3	0	1	4
		% of Total	1.5%	0.0%	0.5%	1.9%
Total		Count	91	24	91	206
		% of Total	44.2%	11.7%	44.2%	100.0%

When using the Chi square below the P value is equals to 0.772 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.803[a]	4	.772
Likelihood Ratio	2.182	4	.702
Linear-by-Linear Association	.032	1	.858
N of Valid Cases	206		

4.5 Association between socio demographical factors and knowledge of cervical cancer screening

4.5.1 Age and knowledge of cervical cancer screening

The Table below indicates that from the 65 (31.6%) respondents aged between 30 and 39, 29 (14.1%) had adequate knowledge, 28 (13.6%) had inadequate knowledge and 8 (3.9%) are not sure. From 77 (37.4%) respondents aged between 40 and 49, 35 (17.0% had adequate knowledge, 24 (11.7%) had inadequate knowledge and18 (8.7%) are not sure. From the 33 (16.0%) respondents aged between 50 and 59, 16 (7.8%) had adequate knowledge, 10 (4.9%) had inadequate knowledge and 7 (3.4%) are not sure. From the18 (8.7%) respondents aged 60 and 69, 6 (2.9%) had adequate knowledge and 5 (2.4%) had inadequate knowledge.

7(3.4%) were not sure. From the 13 (6.3%) respondents aged 70 and above, 6 (2.9%) had adequate knowledge, 6 (2.9%) had inadequate knowledge and 1 (0.5%) was not sure of the knowledge with regard cervical cancer screening.

Table: 4.12 Age and knowledge of cervical cancer screening

		Knowledge of cervical cancer screening			
		Adequate knowledge	Not sure	Inadequate knowledge	Total
Age	30-39 years	29 14.1%	8 3.9%	28 13.6%	65 31.6%
	40-49 years	35 17.0%	18 8.7%	24 11.7%	77 37.4%
	50-59 years	16 7.8%	7 3.4%	10 4.9%	33 16.0%
	60-69 years	6 2.9%	7 3.4%	5 2.4%	18 8.7%
	70 years and above	6 2.9%	1 0.5%	6 2.9%	13 6.3%
Total		92 44.7%	41 19.9%	73 35.4%	206 100.0%

The Table below indicate that when using Chi square the P value is equals to 0.288 which is more than the require4d P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.687[a]	8	.288
Likelihood Ratio	9.538	8	.299
Linear-by-Linear Association	.042	1	.838
N of Valid Cases	206		

4.5.2 Education and knowledge of cervical cancer screening

The Table below indicates that from the 15 (7.3%) of the respondents who never went to school 4 (1.9%) had adequate knowlwdge,4 (1.9%) had inadequate knowledge and 7 (3.4%) are not sure, from 39 (18.9%) who went up to primary school level 17 (8.3%)had adequate knowledge 14 (6.8%) had inadequate knowledge and 8 (3.9%) are not sure,from105 (51.0%) respondents who went up to secondary school level 55 (26.7%)had adequate knowledge,35 (17.0%) had inadequate knowledge and 15 (7.3%)are not sure, from 47 (22.8%) respondents who went up to tertiary level 16 (7.8%) had adequate knowledge,20 (9.7%) had inadequate knowledge and 11 (5.3%) are not sure about the knowledge with regard cervical cancer screening.

Table: 4.13 Education and knowledge of cervical cancer screening

		Knowledge of cervical cancer screening			
		Adequate knowledge	Not sure	Inadequate knowledge	Total
Education	Never went to school	4 1.9%	7 3.4%	4 1.9%	15 7.3%
	Primary school	17 8.3%	8 3.9%	14 6.8%	39 18.9%
	Second school	55 26.7%	15 7.3%	35 17.0%	105 51.0%
	Tertiary	16 7.8%	11 5.3%	20 9.7%	47 22.8%
Total		92 44.7%	41 19.9%	73 35.4%	206 100.0%

The Table below indicate that when using Chi square the P value is equals to 0.790 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.705[a]	4	.790
Likelihood Ratio	1.729	4	.785
Linear-by-Linear Association	.344	1	.557
N of Valid Cases	206		

4.5.3. Employment and knowledge of cervical cancer screening

The Table below indicate that from 51 (24.8%) of the respondents who were employed, 23 (11.2%) had adequate knowledge, 18 (8.7%) had inadequate knowledge and 10 (4.9%) were not sure of the knowledge with regard cervical cancer screening. From 138 (67.0%) of respondents who were unemployed, 59 (28.6%) had adequate knowledge, 51 (24.8%) had inadequate knowledge and 28 (13.6%) were not sure of the knowledge with regard cervical cancer screening. From 17 (8.3%) respondents who were self-employed, 10 (4.9%) had adequate knowledge 4 (1.9%) had inadequate knowledge and 3 (1.5%) were not sure of the knowledge regarding cervical cancer screening

Table: 4.14 Employment and knowledge of cervical cancer screening

			Knowledge of cervical cancer screening			
			Adequate knowledge	Not sure	Inadequate knowledge	Total
Employment	Employed	Count	23	10	18	51
		% of Total	11.2%	4.9%	8.7%	24.8%
	Unemployed	Count	59	28	51	138
		% of Total	28.6%	13.6%	24.8%	67.0%
	Self-employed	Count	10	3	4	17
		% of Total	4.9%	1.5%	1.9%	8.3%
Total		Count	92	41	73	206
		% of Total	44.7%	19.9%	35.4%	100.0%

The Table below indicate that when using Chi square the P value is equals to 0.790 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.705[a]	4	.790
Likelihood Ratio	1.729	4	.785
Linear-by-Linear Association	.344	1	.557
N of Valid Cases	206		

4.5.4. Marital status and knowledge of cervical cancer screening

The Table below indicate that out of 106 respondents who are married 47, (22.8%) had adequate knowledge, 32 (15.5%had in adequate knowledge and 27 (13.1%) are not sure. From 71 respondents who are single, 32 (15.5%) had adequate knowledge 33 (16.0%) had inadequate knowledge and 6 (2.9%) are not sure. From 8 respondents who are divorced, 4 (1.9%) had adequate knowledge 2 (1.0%) had inadequate knowledge and 2 (1.0%) are not sure. From 21 respondents who are widowed, 9 (4.4%) had adequate knowledge, 6 (2.9%) had inadequate knowledge and 6 (2.9%) are not sure about the knowledge of cervical cancer screening.

Table: 4.15 Marital status and knowledge of cervical cancer screening

		Knowledge of cervical cancer screening			
		Adequate knowledge	Not sure	Inadequate knowledge	Total
Marital Status	Married	47 22.8%	27 13.1%	32 15.5%	106 51.5%
	Single	32 15.5%	6 2.9%	33 16.0%	71 34.5%
	Divorced	4 1.9%	2 1.0%	2 1.0%	8 3.9%
	Widow	9 4.4%	6 2.9%	6 2.9%	21 10.2%
Total		92 44.7%	41 19.9%	73 35.4%	206 100.0%

The able below indicates that when using chi square the P value is equals to 0.086 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.091[a]	6	.086
Likelihood Ratio	12.027	6	.061
Linear-by-Linear Association	.023	1	.879
N of Valid Cases	206		

4.5.5. *Religion and knowledge of cervical cancer screening*

The Table below indicates that of the 168 respondents who are Christians, 75 (36.4%) had adequate knowledge, 59 (28.6%) had inadequate knowledge and 34 (16.5%) are not sure. From 34 (16.5%) respondents who are African, 15 (7.3%) had 13 (6.3%) had inadequate knowledge while 6 (2.9%) are not sure. From the 4(1.9%) respondents who belonged to other religions, 2 (1.0%) had adequate knowledge, 1 (0.5%) had inadequate knowledge and 1 (0.5%) is not sure of the knowledge with regard cervical cancer screening.

Table: 4.16 Religion and knowledge of cervical cancer screening

		Knowledge of cervical cancer screening			
		Adequate knowledge	Not sure	Inadequate knowledge	Total
Religion	Christian	75 36.4%	34 16.5%	59 28.6%	168 81.6%
	African	15 7.3%	6 2.9%	13 6.3%	34 16.5%
	Other	2 1.0%	1 0.5%	1 0.5%	4 1.9%
Total		92 44.7%	41 19.9%	73 35.4%	206 100.0%

Using the chi square Table below the P value is equals to0.984 which is more than the required P value of 0.05.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.379[a]	4	.984
Likelihood Ratio	.390	4	.983
Linear-by-Linear Association	.001	1	.971
N of Valid Cases	206		

4.6. Conclusion

In this chapter responses from individual respondents has been outlined and the association between sociodemographic factors has also been clearly demonstrated.

CHAPTER 5: DISCUSSION OF MAJOR FINDINGS

5.1 Introduction

The objectives of the study were to determine the knowledge regarding cervical cancer and its screening among women in a hospital in Limpopo province, South Africa. The reliability result with a Cronbach's alpha was determined. According to Table 4.7 the items collected in the questionnaire were found to be reliable with the overall Cronbach's alpha of 0.659.

5.2 Knowledge of cervical cancer

According to Table 4.1, 193(76%) respondents agreed that cervical cancer is preventable and 61% that it's curable. This means that women who attended Mankweng OPD receive and understand messages through health education that inform them about cervical cancer prevention. About 17(8.3%) respondents who disagreed that cervical cancer is preventable and 19(9.2%) respondents who disagreed that cervical cancer is curable not have the information regarding cervical cancer prevention or did not understand information that is imparted to women through health talks during their visit in the department that it's even curable. The results are consistent with those reported by Kalua (2012) in a study regarding knowledge about human papilloma virus vaccine and cervical cancer among female students at Wits University. In the study most female students also reported that cervical cancer is curable.

A total of 139(67.5%) respondents agreed that cervical cancer is a disease whereby the cells on the mouth of the womb grow out of control but is curable once one is immunised. This is an indication that women in Mankweng are aware of the vaccine for immunisation against cervical cancer. Kalua (2012) in a study regarding knowledge about human papilloma virus vaccine and cervical cancer among female students at Wits University, further reported that more than three quarter of respondents agreed that women can be immunised from cervical cancer.

5.3 Knowledge of risk factors for cervical cancer

As shown in Table 4.2, 149 (72, 3%) of the respondents indicated adequate knowledge of risk factors for cervical cancer and only 20(9.7%) had inadequate knowledge. To the researcher this might be because Mankweng area is a semi urban where people are much more exposed to health facilities with adequate media coverage on health related matters as well as transport to and from those facilities. This is in contrast with the study done by Mutyaba (2006) whose aim was to explore knowledge and awareness of cervical cancer and its screening among Malaysian women who had never had Pap smear. The results indicated that risk factors for cervical cancer screening were only recognised by less than half of the respondents, and risk factors such as early onset of sexual intercourse and parity were not identified.

Women with more than one sexual partner were regarded as being at risk of cervical cancer by145(70.4%) respondents with more than one sexual partner are 18(8.7%), which indicated that these women might have not understood the information regarding cervical cancer and still need to be informed. This differs with the study done by Shah, Vyas, Singh & Shrivasta (2012), on awareness and knowledge of cervical cancer and its prevention among the nursing staff of a tertiary health institution in India where only eight (11.5%) respondents were aware of multiple sexual partners as one of the risk factors for cervical cancer.

5.4 Knowledge about indications of cervical cancer screening

According to Table 4.4 145 (70.4%) of respondents agreed that women experiencing post coital bleeding should consider cervical cancer screening. This means women and health professionals should take post coital bleeding seriously through screening for early detection of possible malignancy. The study concurs with the study done by Tarney & Han (2014) on post coital bleeding: a review on aetiology, diagnosis and management. The study revealed that although most patients with post coital bleeding do not have underlying malignancy, providers must pay close attention to ensure that appropriate screening tests are done in patients experiencing post coital bleeding.

The study in Table 4.4 further revealed that 156 (75.7%) of respondents agreed that women experiencing per vaginal bleeding should be screened for cervical cancer. This gives hope to the researcher that knowledge of signs and symptoms may encourage women to seek screening services. This is in contrast with a study done by Balogun,Odukaya,Oyedira & Ujomu (2012) in Lagos Nigeria where over a quarter of the respondents were not willing to undergo a screening test for cervical cancer, the commonest reason being lack of awareness and absence of symptoms.

5.5 Knowledge about the procedure for cervical cancer screening

About 88(42.7%) of respondents according to Table 4.5 agreed on cervical cancer screening as painful and very 54(26.2%) disagreed with the statement and 65(31.1%) don't know whether the procedure is painful or not. This is an indication that most respondents associate the screening procedure with pain and have never done any because Pap smear itself is totally not painful and for those who are not sure of the procedure it's a clear indication that they never had any screening before. This concurs with the study done by Owoeye & Ibrahim (2013) on knowledge and attitude towards cervical cancer screening among female students and staff in a tertiary institution in Niger Delta. The results indicate that uptake was low in both the staff and the students.

5.6 Socio- demographic association

5.6.1 Introduction

A chi-square analysis was used to determine association between age, educational level, employment, marital status and religion. Each variable will be discussed separately to present the association with knowledge of cervical cancer as reported by respondents.

5.6.2 Socio-demographic factors and knowledge of cervical cancer

It is very important to be aware of the age distribution of respondents to enable the researcher to know whether respondents are old or young (Zindiye, 2008). According to Table 4.6, the p value was found to be 0.798 which is more than the required p value of 0.05 meaning that there is no association between age and knowledge of cervical cancer. Irrespective of age, women have knowledge with regard prevention, risk factors number of sexual partners as well as signs and symptoms. This study is in contrast with the study reported by Bansal, Phakare, Kapoor, Mehrotra &Kokane (2015) on knowledge attitudes and practices related to cervical cancer among adult women. The results revealed that age was an independent predictor of better knowledge.

According to Welma, Kruger & Mitchel (2005), the researcher must clearly define the phenomenon to be analysed. To determine the knowledge regarding cervical cancer it was very important to seek educational qualifications of the respondents to find out whether they understand the importance of education with regard health related issues. Table 4.7 indicate that the p value was 0.528 and this is above the acceptable p value of 0.05, meaning that there was no association between the level of education and knowledge of cervical cancer. However, Ali-Risasi, Mulamba, Verdonck &Van der Broek (2014), in the study on knowledge attitudes and practices about cancer of the uterine cervix among women living in Kingshasa DRC reported a strong association between level of education and knowledge of cervical cancer. Highly educated women scored notably better than those who never went to school or only went to primary school.

In this study about 138(67%) respondents are unemployed. This according to the researcher can contribute to the low intentions of seeking knowledge as far as cervical cancer is concerned due to lack of income which in turn brings about lack of basic needs at home. Table 4.8 indicates whether there is association between knowledge of cervical cancer and employment. The p value was found to be of 0.495 meaning that there was no association between employment and knowledge of cervical cancer. This differs with the study by Ali-Risasi et al (2014) on knowledge attitude and practices about cancer of the uterine cervix among women living in Kingshasa, DRC. The study reported a sufficient score of knowledge regarding cervical cancer positively associated with employment.

Table 4.9 indicate whether there is association between marital status and knowledge of cervical cancer, the p value was found to be 0.970. This means there was no association between marital status and knowledge of cervical cancer. This is in contrast with the study conducted by Dhendup & Tshering (2014) on cervical cancer, knowledge and screening behaviours among female University graduates of year 2012 attending national graduate orientation programme. The results revealed evidence of significant association between those students who are married and knowledge of cervical cancer.

About 168(81.6%) of respondents in this study were found to be Christians. Some churches provide guidelines to their members with regard health care issues and treatment. This might have an impact on the knowledge of women with regard cervical cancer. Table 4.10 indicates the association between religion and knowledge of cervical cancer. The p value was found to be 0.772 which is more than the required p value of 0.05. The findings indicate that there was no significant association between religion and knowledge of cervical cancer in this study and this does not mean women have to follow a certain religion to be knowledgeable about cervical cancer. This study differs from that of Ali-Risasi et al (2014) on knowledge attitudes and practices about cancer of the uterine cervix among women living in Kingshasa DRC, which revealed that there is a significant association between religion and knowledge of cervical cancer.

5.6.3 Socio-demographic factors and knowledge of cervical cancer screening

Table 4.11 presents the association between age and knowledge of cervical cancer screening in line with the National Cancer Screening Programme of 30 years and above. The p value recorded 0.288 which means that there was no association between knowledge of cervical cancer screening and age and therefore age does not determine knowledge of cervical cancer screening in this study. In contrast, Oche, Kaoje,Gana,&Ango (2013) in a study on cancer of the cervix and cervical screening current knowledge attitudes and practices of female health workers in Sokoto revealed a statistically significant association between increasing age of respondents and uptake of Pap smear.

Table 4.12 shows the association between education and knowledge of cervical cancer screening, the p value for the association between educational level and knowledge of cervical cancer screening was found to be 0.495. This is more than the required p value of 0.05. According to the researcher there was no association between education and knowledge of cervical cancer screening and that level of education does not in any way determine knowledge of cervical cancer screening in this study. However, the findings of this study differs from that of Bansal et al (2015) in the study on knowledge, attitudes and practices related to cervical cancer among adult women, who found that educational level influences attitude towards screening.

According to Table 4.13, the researcher found no association between employment and knowledge of cervical cancer screening and the p value recorded 0.790. This means that employment or unemployment does not determine knowledge of cervical cancer screening in this study. In contrast to this, is the study done by Kumar and Tanya (2014) on knowledge and screening for cervical cancer among women in Mangalore city, where it was revealed that employed women had higher education, and educated women had a higher knowledge of cervical cancer screening.

Table 4.14 indicate that there was no association between marital status and knowledge of cervical cancer screening in this study, the p value for the association between marital status and knowledge of cervical cancer screening was found to be 0.086. This indicates that marital status does not determine knowledge of cervical cancer screening. The findings of this study were supported by Hyacinth, Adekuye,

Ibeh & Osoba (2012) who also in a study on cervical cancer and Pap smear test among Federal Civil Servants in north central Nigeria, found that there was no statistical significant relationship between marital status and Pap smear test awareness, perception and utilisation, although there was a higher awareness about cancer of the cervix among single women.

Table 4.15 indicate that there was no association between religion and knowledge of cervical cancer screening in this study and the p value was 0.984. In a study conducted by Ekechi,Olaitan,Ellis,Koris,Amajuoji & Marlow (2014) on knowledge of cervical cancer and attendance at cervical cancer screening: a survey of black women in London, it was revealed that attending religious services more frequently were associated with being overdue for screening.

Table 4.3 the researcher noted no difference in the overall average percentages between adequate 91(44.2%) and inadequate 91(44.2%) knowledge of cervical cancer. This means that the same number of women with adequate knowledge is equals to the same number of women with inadequate knowledge which is an indication of an overall poor knowledge of cervical cancer. In Table 4.6, which indicates the overall average percentage for knowledge with regard cervical cancer screening, there was statistically no significant difference noted by the researcher between adequate knowledge 92(44.7%) and inadequate knowledge 73(35.4%) of cervical cancer screening in this study. These to the researcher indicate generalised poor knowledge of cervical cancer screening which cannot compel a woman to go for cervical cancer screening in this study.

The overall average results with regard association of knowledge of cervical cancer and its screening and socio demographic factors in women in the Mankweng area where the study was conducted indicate that age, educational level, employment status, marital status and religion do not determine knowledge of cervical cancer and its screening. This according to the researcher can be attributed to the fact that when giving health education to clients in the health care facilities there is practically no divisions according to these factors. Every individual who happens to be present during health presentation has an equal opportunity to receive information as

presented irrespective of age, educational level, employment, marital status as well as religion.

The results also indicate that there is more still to be done by the Health Department with regard education of the community about cervical cancer. The levels of adequate knowledge with regard cervical cancer risks and the symptoms there of in this study can be attributed to the fact that an emphasis was laid by government with the introduction of free cervical cancer screening from age of 30 and above and information through pamphlets was distributed to the public to this effect.

5.6.4. Limitations of the study

This study was conducted in Mankweng hospital outpatient department only and therefore the findings cannot be generalised to other outpatient departments in other hospitals.

The respondents in this study might have experienced uneasiness to communicate their true feelings about the subject cervical cancer and its screening to a person whom they were meeting for the first time.

In this study some respondents sited seeing the doctor first before attending to the questionnaire and therefore the researcher had to wait until after consultation.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Recommendations

The following recommendations are made by the researcher based on the study findings as discussed.

- Intensification of Health education with regard cervical cancer and its screening through messages on screens and billboards to minimise stigma, and to emphasise the fact that women's health is worth talking about.

- A screening centre which caters for Pap smear, visual inspection with acetic acid and intensive training for health professionals should be established in all Provinces and all Districts for accessibility and intensification Health Education.

- The Department of health need to collaborate with the Department of Education to incorporate health education with regard cervical cancer and its screening at primary School level of education.

- Department of health to collaborate with other government stakeholders e.g. municipality to extend health information to other places like stadiums churches so that men also can be informed about health related issues in particular cervical cancer and its screening.

- Motivation talks by health care workers targeting women of all ages for women to have knowledge of cervical cancer and to undergo screening without fear of embarrassment.

- Provision of health information to home based carers to disseminate to the community in their own languages as well as health information pamphlets to distribute to the community.

6.2 Conclusion

The study aimed at determining knowledge of women regarding cervical cancer and its screening in a Hospital in Limpopo Province. The study included 206 women above the age of 30 years visiting general outpatient department in Mankweng hospital. The South African Government introduced three free cervical cancer screening in Government hospitals and clinics for women over the age of 30, for widespread coverage relating to knowledge of cervical cancer and its screening.

The study findings indicate that despite adequate knowledge of risk factors associated with cervical cancer, signs and symptoms of cervical cancer which can be attributed to the fact that to some extent, health education is given to clients during their visits to health facilities, the overall score still indicate poor knowledge among women with regard cervical cancer and cervical cancer screening. However most respondents agreed that women can receive immunisation for from cervical cancer and that it is preventable.

Knowledge of cervical cancer is the critical element which determines whether a woman will undergo cervical cancer screening or not. Leyva, Byrd & Tarwater (2006) indicate that knowledge about cervical cancer screening enables men to encourage their wives and women to encourage other women to be screened.

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APPENDICES

APPENDIX 1:QUESTIONNAIRE ENGLISH VERSION

SECTION A: SOCIO-DEMOGRAPHIC DATA

My name is Phaahla Paulina Manchadi, a research student at University of Limpopo. I am going to give you this questionnaire for you to fill. The information will be used to improve health services and will be kept confidential. You have the right to refuse or withdraw even if you have already signed the consent form.

Write your age on the space provided and tick in the appropriate square

1. Age.....

2. Education

Never went to school	1
Primary	2
Secondary	3
Tertiary	4

3. Employment

Employed	1
Unemployed	2
Self employed	3

4. Marital status

Married	1
Single	2
Divorced	3
Widow	4

5. Religion

Christian	1
Muslim	2
African	3
Other	4

SECTION B: KNOWLEDGE OF CERVICAL CANCER

INDICATE WITH AN X TO THE APPROPRIATE BOX WHETHER YOU AGREE NEUTRAL OR DISAGREE WITH THE STATEMENT

STATEMENT	AGREE	NEUTRAL	DISAGREE
6.Cervical cancer is preventable			
7.Cervical cancer is curable			
8.Women who start having sexual intercourse at an early age are at risk of cervical cancer			
9..Women with more than one sexual partner are at risk of developing cervical cancer			
10.Women having more than five child are at risk of developing cervical cancer			

11.Women experiencing increased per vaginal discharge are at risk of developing cervical cancer			
12.Painful intercourse is one of the symptoms of cervical cancer			
13.Cervical cancer is a disease whereby the cells on the mouth of the womb grow out of control			
14.Cervical cancer is rare in women under the age of 25			
15.Women can be immunised from cervical cancer			

SECTION C

KNOWLEDGE OF CERVICAL CANCER SCREENING

STATEMENT	AGREE	NEUTRAL	DISAGREE
16.Cervical cancer screening is painful			
17.Cervical cancer screening is more accurate when done during the time when a woman is having menstrual periods			
18.A speculum is gently inserted into the vagina to hold it open for good visibility of the cervix			
19.Only married women should get screened for cervical cancer			
20.Cervical cancer screening is done at government hospitals/clinics/private hospital			

21.Women experiencing post coital bleeding should be screened for cervical cancer			
22.Women experiencing per vaginal bleeding should be encouraged to do cervical cancer screening			
23.Cervical cancer screening is very expensive			
24.Cervical cancer screening is done to women who are unable to bear children			
25.Cervical cancer screening is only done to women who have been sexually active for more than ten years			
26.Pap smear is one of the screening tests for cervical cancer			
27.Every woman in south Africa is entitled for a free pap smear at government hospital/clinics			
28.A woman should start cervical cancer screening when she is sexually active			

APPENDIX 2: QUESTIONNAIRE SEPEDI VERSION

PAMPIRI YA DIPOTŚIŚWANA

KAROLO A: BOITSEBIŚO

Ke nna Paulina Manchadi Phaahla moithuti ka lefapheng la dinyakišišo /research mo University ya Limpopo. Ke tlo go fa pampiri ye ya dipotšišwana gore o e arabe. Ditaba tše dileng mo pampiring ya dipotšišo di tlo thuša go hlabolla seemo sa tša maphelo ,e feela e tla ba sephiri magareng ga rena .Ga se kgapeletšo, ge o bona eka o ka se kgone go tšwela pele ka dipotšišo ga go na bothata le ge o šetše o sainile pampiri ya go dumela go araba dipotšišo.

Ngwala mengwaga ya gago mo sekgobeng se o be o bontšhe ka go thala sefapano tšeo di go amago ka gare ga lepokisana

1. Mengwaga.....

2. Dithuto

Ga se ka tsena sekolo	1
phoraemari	2
Sekontari	3
Dithuto tša godimo	4

3. Mośomo

Ke a šoma	1
Ga ke šome	2
Ke a ipereka	3

4. **Nyalo**

Ke nyetšwe	1
Gake a nyalwa	2
Ke hladile/lwe	3
Ke mohlolo/mohlologadi	4

5. **Ditumelo**

Ke moKeresete	1
Ke moMuslim	2
Ke moAfrika tumelong	3
Ditumelo tše dingwe	4

KAROLO B: TSEBO KA KANKERE YA MOLOMO WA POPELO

BONTŠHA KA SEFAPANO (X) KA MO LEPOKISANENG GORE O A DUMELA, O MAGARENG, GOBA GA O DUMELE LE SEO SE BOLWALWAGO

STATAMENTE	**KE A DUMELA**	**KE MAGARENG**	**GA KE DUMELE**
6.Kankere ya molomo wa popelo e a thibelega			
7.Kankere ya molomo wa popelo e a fola			
8. Basadi bao ba thomago tša thobalano e sa le ba bannyane baka swarwa ke kankere ya molomo wa popelo			

9.Basadi bao ba tsenelago tšа thobalano le banna ba go feta ba babedi ba ka swarwa ke kankere ya molomo wa popelo			
10.Basadi bao ba nago le bana ba go feta ba bahlano ba ka swarwa ke kankere ya molomo wa popelo			
11.Basadi bao ba tšwago ditšhila ka bosading bja bona ba ka swarwa ke kankere ya molomo wa popelo			
12.Bohloko ka nako yeo mosadi a tsenelago tsa thobalano e ka ba seka sa go bontšha gore mosadi a ka be a na le kankere ya molomo wa popelo			
13.Kankere ya molomo wa popelo ke bolwetši bjoo di sele tšа molomo wa popelo di golago ka go se laolege			
14.Kankere ya molomo wa popelo ga e hwetšagale ka bontšhi go basadi ba mengwaga ya ka tlase ga 25			
15.Basadi ba ka entelwa bolwetši ba kankere ya molomo wa popelo			

KAROLO C:

TSEBO KA GO HLOLA KANKERE YA MOLOMO WA POPELO

STATAMENTE	KE A DUMELA	KE MAGARENG	GA KE DUMELE
16.Go hlola bolwetši bja kankere ya molomo wa popelo go bohloko			
17.Go hlola kankere ya molomo wa popelo go ntšha dipoelo tše kaone kaone ge mosadi a le kgweding			
18.Kotana ya go hlola e lokelwa gabotsana ka sethong sa bosadi go re se bulege molomo wa popelo o kgone go bonala gabotse			
19.Basadi bao ba nyetšwego feela ke bona ba swanetšego go hlola kankere yo molomo wa popelo			
20. Go hlola kankere ya molomo wa popelo go dirwa feela dipetleleng tša mmušo			
21. Basadi bao bareng ka morago ga go tsenela tša thobalano ba tšwa madi ba swanetše go hlola kankere ya molomo wa popelo			
22.Basadi bao ba rego ge ba eya kgweding ba ela sa ruri ke gore ba tšwa madi a mantšhi ba swanetše go hlohleletšwa gore ba hlole kankere ya molomo wa popelo			
23.Go hlola kankere ya molomo wa popelo go tura kudu			

24.Go hlola kankere ya molomo wa popelo go dirwa feela go basadi bao ba se nago le bana			
25.Go hlola kankere ya molomo wa popelo go dirwa feela ke basadi bao ba tsenetšego thobalano go feta mengwaga e lesome			
26. *Pap smear* ke ye nngwe ya ditsela tseo kankere ya molomo wa popelo e hlolwago ka gona			
27. Mosadi yo mongwe le yo mongwe mo Afrika Borwa o loketšwe go hlola kankere ya molomo wa popelo mahala mo dipetleleng tsa mmušo			
28. Mosadi o swanetše go hlola kankere ya molomo wa popelo ge a thomile tša thobalano			

APPENDIX 3: CONSENT FORM ENGLISH VERSION

CONSENT FORM

PROJECT TITLE: KNOWLEDGE REGARDING CERVICAL CANCER AND ITS SCREENING AMONG WOMEN AT MANKWENG HOSPITAL LIMPOPO PROVINCE, SOUTH AFRICA.

PROJECT LEADER: PHAAHLA P.M

A. DECLARATION BY THE PARTICIPANT

I HEREBY CONFIRM AS FOLLOWS:

The following aspects have been explained to me:

Aim: The aim of the study is to determine the knowledge regarding cervical cancer screening among women in Mankweng Hospital Limpopo Province, South Africa.

The study will describe the knowledge regarding cervical cancer and cervical cancer screening among women in Mankweng Hospital Limpopo Province South Africa.

Risks: There are no risks attached to your participation in the study.

Possible benefits: The research will help to identify the gaps as well as shortfalls in the National Health Cervical Cancer screening programme. Lack of knowledge and poor practices with regard cervical cancer screening could guide future educational and clinical intervention to increase cervical cancer screening coverage and awareness.

Confidentiality: All information provided to the researcher will be treated as confidential.

Voluntary participation/refusal/discontinuation: Participation is voluntary and you have a right to refuse participation in the study. Refusal to participate will not in any way influence any future relationships with the interviewer.

No pressure was exerted on me to consent to my participation and I understand that I may withdraw at any stage without penalization.

Participation in this research will not result in any additional costs to me.

B. I HEREBY CONSENT VOLUNTARILY TO PARTICIPATE IN THE ABOVEMENTIONED RESEARCH PROJECT

By signing below, I (participant) ....., agree to take part in the study.

Signed at....., on.....2015

.....

Signature of participant

C. STATEMENT BY THE PROJECT LEADER

I ..... declare that all the information provided by the participant will be treated as confidential.

Signed at ..... On.....2015

.....

Signature of researcher

APPENDIX 4: CONSENT FORM SEPEDI VERSION

FOROMO YA GO DUMELA

HLOGO YA LENANEO:

TSEBO KA TŠA KANKERE YA MOLOMO WA POPELO LE GO E HLOLA MAGARENG GA BASADI SEPETLELEENG SA MANKWENG PHOROBENTSHENG YA LIMPOPO AFRIKA BORWA

MOETELEDI PELE WA LENANEO: PHAAHLA P.M

A. MAIKANO KA MOTŠEAKAROLO

KE TIIŠELETŠA GORE:

Ke thlaloseditšwe ka dinthla tše:

MAIKEMIŠETŠO: Maikemišetšo a dinyakišišo tše ke go setšha tsebo mabapi le kankere ya molomo wa popelo le go e hlola magareng ga basadi sepetleleng sa Mankweng Phorobentsheng ya Limpopo Afrika Borwa.

Dinyakišišho tše ditla hlalosa seemo sa tsebo mabapi le kankere ya molomo wa popelo le go e hlola magareng ga basadi sepetleleng sa Mankweng Phorobentsheng ya Limpopo Afrika Borwa.

TŠE MPE TŠE DI KA DIREGAGO: Ga gona dikotsi ge ke tšea karolo mo dinyakišišong tše.

MOHOLA: Dinyakišišo di tlo thuša go bona dikgoba le go thlaetša ga lenaneo la go hlola malwetši a di kankere.Ge eba tsebo ya go hlola kankere ya molomo wa popelo e a hlaelela, dinyakišišo tse ditla thuša gore lenaneo la go hlola le diriwe bjang ka moso le gore go diriwe eng gore lenaneo le le tsebege

SEPHIRI GOBA KHUPAMARAMA: Ditaba ka moka tše o tla bego o di boletše di tla dirwa gore di se tsebege gore di tšwa go mang.

GO TŠEA KAROLO NTLE LE KGAPELETŠO/GO GANA GO TŠEA KAROLO/GO TLOGELA GO TŠEA karolo mo gare ga sebaka: Go araba di potšišwana ga go gapeletšwe, O dumeletšwe go gana go tšea karolo ge o sa nyake.e bile se sekase dire gore setswalle sa rena se hwe.

Ga se ke gapeletšwe go dumela go tšea karolo e bile ke kwešiša gore nka no tlogela mo gare ga sebaka geke sesa nyaka go tšwela pele.

Ge ke dumetše go tšea karolo ga ke tlo patela selo.

B: KE DUMELA GO TŠEA KAROLO MO PROJEKENG YE E HLALOSWAGO MO GODIMO NTLE LE KGAPELETŠO.

Ke dumela go tšea karolo mo protšekeng ye ka go saena

Nna(motšeakarolo).....ke dumela go tšea karolo mo dinyakišišong tše

Saenilwe(lefelo).....ka(Letšatšikgwedi).....2015

.....

Saene ya Motšea karolo

C. SETATAMETE SA MOETAPELE WA POROTŠEKE

I, ... ke tšhephiša gore ditaba tše di lego mo di tla tsebega magareng gaka le motšea karolo feela

Saenilwe (lefelo) ..... Ka (letšatšikgwedi.....2015

.....

Saena Hlogo ya Lenaneo

APPROVAL 5: ETHICAL CLEARENCE FROM TREC (TURFLOOP RESEARCH CLEARENCE COMMITTEE

University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2212, Fax: (015) 268 2306, Email:noko.monene@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

MEETING:	**02 September 2015**
PROJECT NUMBER:	**TREC/122/2015: PG**
PROJECT:	
Title:	Knowledge regarding Cervical Cancer and its Screening among women at Mankweng Hospital Limpopo Province, South Africa
Researcher:	Ms PM Phaahla
Supervisor:	Mr MP Kekana
Co-Supervisor:	N/A
Department:	Medical Sciences, Public Health and Health Promotion
School:	Health Science
Degree:	Masters in Public Health

PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

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

Finding solutions for Africa

APPENDIX 6: APPROVAL FROM THE DEPARTMENT OF HEALTH LIMPOPO PROVINCE

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Enquiries: Latif Shamila 015 2936210

Ref:4/2/2

Phaahla PM
University of Limpopo
Private Bag X1106
Sovenga
0727

Greetings,

RE: Knowledge regarding Cervical Cancer and its screening amongst woman at Mankweng Hospital Limpopo Province, South Africa

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
   - Research must be loaded on the NHRD site (http://nhrd.hst.org.za) by the researcher.
   - Further arrangement should be made with the targeted institutions.
   - In the course of your study there should be no action that disrupts the services.
   - After completion of the study, a copy should be submitted to the Department to serve as a resource.
   - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
   - The above approval is valid for a 3 year period.
   - If the proposal has been amended, a new approval should be sought from the Department of Health.

Your cooperation will be highly appreciated.

Head of Department

05/11/2015
Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: http/www.limpopo.gov.za

PPENDIX 7: APPROVAL FROM DISTRICT OFFICE (PRIMARY HEALTH CARE) (PILOT STUDY) MAKANYE CLINIC

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT
CAPRICORN DISTRICT

Enq : **Malema DMM**

Tel : **015 290 9266**

From : **Primary Health Care**

Date : **18 November 2015**

To : **Phaahla PM**
University of Limpopo
Private Bag X 1106
Sovenga
0727

Cc : **Makanye clinic**

Re: Knowledge regarding Cervical Cancer and its screen amongst women

The above matter bears reference

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that :
    - In the course of your study there should be no action that disrupts the services.
    - After completion of your study, a copy should be submitted to the Department to serve as a resource.
    - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.

Your cooperation will be highly appreciated.

Action Senior Manager PHC

2015.11.19
Date

APPENDIX 8: APPROVAL TO COLLECT DATA MANKWENG HOSPITAL LIMPOPO PROVINCE SOUTH AFRICA

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

MANKWENG HOSPITAL

Ref: S5/3/1/2

Enq: Lehlokoa M.J.

From: HR Utilization and Capacity Development

Date: 17 November 2015

To: Phaahla P.M.
University of Limpopo
Sovenga
0727

PERMISSION TO CONDUCT RESEARCH AT MANKWENG HOSPITAL: PHAAHLA P.M.

1. The above matter has reference.
2. This is to confirm that Phaahla P.M. has been granted permission to conduct research on " Knowledge regarding Cervical Cancer and its screening".
3. She will be conducting research as from 23 Monday November 2015.
4. Attached please find her approval letter from Provincial Office, Research ethics clearance certificate and Research Proposal.

Thanking you in advance

Chief Executive Officer

2015/11/18
Date

Department Of Health
Mankweng Hospital
Receiver: Nkwe
2015 -11- 17
Office No: 106
Tel: 015 286 1016
LIMPOPO PROVINCE

APPENDIX 9: CONFIRMATION LETTER FROM LANGUAGE EDITOR

Fax: 01526828683174
Tel. 0152862684
Cell: 0822198060
Rammalaj@ul.ac.za

Dr J R Rammala
440B Mankweng
Box 4019
Sovenga
0727

To whom it may concern

22 September 2016

Confirmation letter: Phaahla P M

This memo serves to confirm that I edited a dissertation by the above-mentioned candidate entitled: **Knowledge regarding cervical, cancer and its screening among women at Mankweng Hospital, Limpopo Province, South Africa**.

In the process I looked at editing on language usage and technical issues as stated by our Research Administration and Development Manual for postgraduate Research. The manual prescribes the typology and referencing style within the text. It also provides choices for the referencing styles in the reference list. Unless this is specified by a particular discipline the candidate must be consistent with the choice they make.

The first document send is marked with track changes indicating what I changed and what I suggested should be changed. The document was not well-written with regard to the referencing style. This had to be redone as the candidate did not follow any known referencing style. There were some inconsistencies with the style used but this was corrected.

I then accepted the track changes on the second document which I send for the candidate to submit for assessment. There were some challenges with figures

and tables which could not be resized and as a result they were moved to the following pages even though they left some open spaces in the previous pages.

I confirm that the document is now readable and clean with regard to language issues and recommend that it can be submitted for assessment.
Thanks

Signed:.....

Dr J R Rammala