

DECLARATION

I, Mudau Azwinndini Gladys, declare that this dissertation titled Knowledge, Attitudes and Practices Regarding Cervical Cancer Screening Among Women Attending Tshilidzini Hospital, Limpopo Province, is my own work and that all materials contained herein have been duly acknowledged.

**KNOWLEDGE, ATTITUDES AND PRACTICES
REGARDING CERVICAL CANCER SCREENING AMONG
WOMEN ATTENDING TSHILIDZINI HOSPITAL,
LIMPOPO PROVINCE**

by

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A dissertation submitted in partial fulfilment of the requirement for the degree:

Master of Public Health (MPH)

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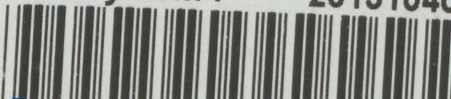
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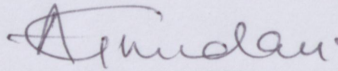


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DECLARATION

I, **Mudau Azwinndini Gladys**, declare that this dissertation titled **Knowledge, Attitudes and Practices Regarding Cervical Cancer Screening Among Women Attending Tshilidzini Hospital**, submitted by me to the University of Venda has not been submitted before for any degree or examination at this or any other university. I further declare that it is my own work in design and execution, and that all materials contained herein have been dully acknowledged.

Mrs. A.G. Mudau
(Student)



Date: November 2014

ACKNOWLEDGEMENTS

DEDICATION

First and foremost, I want to thank the Almighty God for giving me the strength, wisdom and courage to persevere in the completion of this study.

I dedicate this study to my late mother, Mrs Nkhumeleni Elisa Ravele-Mukwevho and my late mother-in-law, Mrs Munyadziwa Selinah Mudau. May their souls rest in peace.

I am also grateful to Mr Benjamin Manenzhe for typing this document and Mr Moya for his assistance in analysing data. Finally, my special gratitude goes to my husband and children for their continued support and loyalty throughout the research process.

I would also like to thank Professor Donaven Hiss, Department of Medical Biosciences, University of the Western Cape, for editorial assistance and advice on typesetting of the manuscript.

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- ✿ I am also grateful to Mr Benjamin Manenzhe for typing this document and Mr Moyo for his assistance in analysing data. Finally, my special gratitude goes to my husband and children for their continued support and loyalty throughout the research process.
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ABSTRACT

Cervical cancer continues to be a significant cause of morbidity and mortality, particularly in the developing world, due to a lack of effective population screening. Although cervical cancer screening is an effective method for the reduction of the incidence and mortality of the malignancy, the unfortunate observation on the ground is that the screening attendance rate at Tshilidzini Hospital has been far from satisfactory. The main purpose of this study was to assess the knowledge, attitudes and practices regarding cervical cancer screening among women attending Tshilidzini Hospital in Limpopo Province. The study thus included all women above the age of 18 years attending Tshilidzini Hospital Outpatient Department and Tshilidzi Gateway Clinic. A quantitative approach was adopted. Non-probability convenient sampling was used to select participants and questionnaires were used to collect data. All data was analysed using the Statistical Package for Social Sciences (SPSS, Version 22). The study established that the majority of the women who were aware of cervical cancer did not know that it was preventable and did not take a pap smear during the previous six months. It was also found that most of the women were not aware of the dangers of cervical cancer. The majority of the women who took a pap smear were aged between thirty and forty. The main mode of information dissemination was found to be nurses and the media. It was concluded that women had little knowledge about cervical cancer screening and even though a majority of them had a positive attitude towards pap smear, they did not practice it. The study made a number of recommendations that were intended to improve the knowledge, attitude and practice of cervical cancer screening. These recommendations call for more campaigns to

reach rural and urban women and the training of more nurses specialising on Oncology.

LIST OF ACRONYMS

ACS	American Cancer Society
AGUCs	Atypical Glandular Cells of Mixed Undetermined Significance
AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
ASIR	Age-Standardised Incidence Rate
ASCUS	Atypical Squamous Cell of Undetermined Significance
CANSA	Cancer Association of South Africa
CEO	Chief Executive Officer
CHC	Community Health Centre
CIN	Cervical Intraepithelial Neoplasia
DHJH	Donald Frazier Hospital
DHIS	District Health Information System (2)
DoH	Department of Health
GP	General Practitioner(s)
HPV	Human Papilloma Virus
DIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HSIL	High Grade Squamous Intra-Epithelial Lesion
HST	Health Systems Trust
IEC	Information Education and Communication
KAP	Knowledge, Attitude and Practices
LLETZ	Large Loop Excision of the Transformation Zone
LSIL	Low-Grade Squamous Intra-epithelial Lesion
NCR	National Cancer Registry
NDoH	National Department of Health
NHLS	National Health Laboratory Services
PAHO	Pan African Health Organization
Pap	Pap smear(s)
PHC	Primary Health Care
SIL	Squamous Intraepithelial Lesion
SPSS	Statistical Package for Social Science
STI	Sexual Transmitted Infection(s)
TCL	Tshabalala Gateway Clinic
THOPD	Tshabalala Hospital's Out Patient Department
UK	United Kingdom
USA	United States of America
VIA	Vaginal Inspection with Acetic Acid
WHO	World Health Organization

LIST OF ACRONYMS

ACS	:	American Cancer Society
AGUCS	:	Atypical Grandular Cells of Minded Undetermined Significance
AIDS	:	Acquired Immune Deficiency Syndrome
ARV	:	Antiretroviral
ASIR	:	Age Standardised Incidence Rate
ASCUS	:	Atypical Squamous Cell of Undetermined Significance
CANSA	:	Cancer Association of South Africa
CEO	:	Chief Executive Officer
CHC	:	Community Health Centre
CIN	:	Cervical Intraepithelial Neoplasm
DFH	:	Donald Fraser Hospital
DHIS	:	District Health Information System ()
DoH	:	Department of Health
GPs	:	General Practitioner(s)
HPs	:	Health Practioner(s)
HIV	:	Human Immunodeficiency Virus
HPV	:	Human Papiloma Virus
HSIL	:	High Grade Squamous Intra-Epithelial Lesion
HST	:	Health System Trust
IEC	:	Information Education and Communication
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PAHO	:	Pan African Health Organization
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PHC	:	Primary Health Care
SIL	:	Squamous Intraepithelial Lesion
SPSS	:	Statistical Package for Social Science
STI	:	Sexual Transmitted Infection(s)
TGC	:	Tshilidzi Gateway Clinic
THOPD	:	Tshilidzini Hospital's Out Patient Department
UK	:	United Kingdom
USA	:	United States of America
VIA	:	Visual Inspection with Acetic Acid
WHO	:	World Health Organization

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1.1 Background

Worldwide, cervical cancer is the second most common cause of cancer-related deaths (World Health Organization (WHO), 2009) and it is responsible for approximately 250,000 annual deaths, most of which occur in developing countries (WHO, 2009). The incidence of cervical cancer has been controlled in developed countries due to the widespread use of cervical cancer screening systems, especially the systematic use of the Papanicolaou (pap) smear (Cronje, 2005). It is notable that globally, developing countries spend only 5% of their resources on cancer, thus leading to higher incidence and mortality rates in these countries (WHO, 2009).

Like many other developing countries, China faces a heavy burden of the disease with regard to women's health. China accounts for 29% of the 51,000,000 new cases of cervical cancer each year. Cervical cancer is the eighth most common malignant cancer among females in mainland China with an age standardized incidence rate (ASIR) of 5.13 per 100,000 inhabitants. Although the incidence of cervical cancer in China is low in comparison to that of Western countries, the mortality rate remains high, especially in rural areas (WHO, 2009).

In South Africa, the National Department of Health (NDoH) introduced the National Guidelines (2003) for cervical cancer screening programme. The aim of the policy was to reduce the incidence of cervical cancer by screening at least 70%

CHAPTER 1

INTRODUCTION

1.1 Background

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In South Africa, the National Department of Health (NDoH) introduced the National Guidelines (2000) for cervical cancer screening programme. The aim of the policy was to reduce the incidence and mortality of cervical cancer by screening at least 70%

of women aged 30 to 59 years within 10 years of initiating the programme. The reason for selecting the minimum age of 30 years is to increase the efficiency of cervical cancer testing as the risk of the disease increases with age and the resources are limited. According to the National Policy (2000), every woman who uses public health facilities is entitled to 3 free pap smears in her lifetime, starting from the age of 30 years with an interval of 10 years between the tests (Moodley and Mould, 2004).

The project for implementation was steered by the NDoH, the Women's Health Research Unit (WHRU) of the University of Cape Town, the Women's Health project of the University of the Witwatersrand and Engender Health, United States of America (USA). Furthermore, the implementation of the programme was supposed to be integrated into the District Health System (Kawanga, Moodley, Brandley and Hoffman, 2004).

There are five components that enable the rendering of a successful programme.

These components are:

- ✿ Strengthening the health system by improving resources.
- ✿ Re-training of service providers at the primary care level.
- ✿ Quality improvement in cytology laboratories.
- ✿ Health education for service users within both the facilities and the community.
- ✿ Active recruitment of the target population by health care providers (Kawanga *et al.*, 2004).

According to a study conducted in Zambia, cervical cancer remains a significant cause of morbidity and mortality due to lack of access to early detection and treatment. In November 2008, the centre for infectious diseases in Zambia began enrolling women in their cervical cancer programme that targeted both Human Immuno-Deficiency Virus (HIV) and Non-HIV infected female patients, the programme reduced the mortality and morbidity due to cervical cancer (WHO, 2010).

The Gracia, Jema, Ward, Center and Hao (2007) report in the American Cancer Society has caused considerable international concern over its possible adverse effect on current successful cancer control in America in response to the Halls Report. Approximately 3,680 South African women die of cervical cancer every year and according to the South African National Cancer Registry (2001), this represents a 96% mortality rate (WHO, 2010). There are approximately 5.7 million HIV-positive people in South Africa, of which 60% are women at high risk for the Human Papilloma Virus (HPV) (WHO, 2010).

Deaths due to cervical cancer are projected to rise by almost 25% over the next 10 years, if countries do not urgently act to stop its spread (WHO, 2006). The deaths could be prevented if the disease is detected early. The slow progression from mild dysplasia to carcinoma makes cervical cancer a feasibly preventable disease and provides the rationale for screening. There are various methods of screening, but cytology is recommended for large-scale cervical cancer screening programmes where sufficient resources exist (Ferlay *et al.*, 2004).

Black South African women are at high risk of developing cervical cancer. The reported prevalence of cervical cancer for black women in South Africa is 40 per



100,000 (National Cancer Registry, 1998). At least 1 in 23 black women will develop cervical cancer in their life time (Megevand, 2003). A total of 6,061 new cases of cervical cancer were reported in South African Cancer Registry in 1998, thus representing 20% of all women cancers for that year. In 1999, 5,203 new cases were reported, representing 17% of all female cancers for that year (Statistical Notes, 2001). About 84% of all women presenting with cervical cancer in 1998 – 1999 were African women (Kawanga *et al.*, 2004).

Statistical notes from the DoH, however, indicate an average of 3,387 new cases reported, with 1,497 deaths in 1994. They also reported a lifetime risk of 1 in 34 black females and 1 in 93 for white females. South African women are reported to be similar to those found in the rest of Africa (Moodley and Mould, 2004), where current annual estimates are 6,742 women being diagnosed with cervical cancer and 3,681 dying from it. It is the first most frequent cancer among women aged 15 and 44 years (Mqoqi, Kellet, Sitas and Jula, 2004). The risk of developing cancer of the cervix increases with age peaking at 136.4 per 100,000 in women between the ages of 64 and 69 in 1999 (Mutyaba, Mmirow and Weiderpass, 2006). Previously, pap smears were done on an *ad hoc* basis and offered on request by women in their reproductive stage coming for family planning. Women who had access to private health care had pap smears on demand, whereas women using the public health sector were not informed of the availability of the service.

Infection with the HPV has been identified as a precursor for most of the cervical cancer cases; however, HPV is a necessary but not sufficient cause for cervical cancer (Burd, 2003). Virtually 99.7% of cervical cancer cases are linked to genital infection with HPV (WHO, 2006). There are about 40 types of HPV that can infect the human



genital tract. They are classified into high risk and low risk types with high risk types leading to cervical cancer while low risk types lead to genital warts. Furthermore, HPV is the most common Sexually Transmitted Infection (STI) worldwide, affecting an estimated 50 – 80% of sexually active women at least once in their lifetime (Lewis, 2004).

Women in their 60s are more prone to developing cervical cancer than younger women. The peak age for the incidence of cervical cancer is 55 – 64 years (Mqoqi *et al.*, 2004). Use of oral contraceptives for more than 5 years increases the risk of cervical cancer. A study done by Moodley and Mould showed that HIV-infected women in Africa present with carcinoma of cervix at a younger age and show a more rapid decline in health and earlier demise (Moodly and Mould, 2005). Other factors that influence progression to invasive cancer are multi-parity and cigarette smoking (Denny, 2006). The low level of education and socio-economic conditions are also contributing factors to the high morbidity and mortality for cervical cancer (Recardo and Jeinstien, 2005).

It should be under scored that the primary cause of cervical cancer is the HPV. It is sexually transmitted and accounts for 70% of cervical cancer cases. There are over 100 HPV strains and 13 of which can cause cervical cancer. HPV is highly transmissible with a peak incidence soon after the onset of sexual activity. Other related risk factors include:

- ✿ Early age of onset of sexual intercourse;
- ✿ Parity (HPV is less common among women with decreased parity);
- ✿ Smoking (women who smoke are more susceptible to cervical cancer);



- ✿ Failure to always use barrier methods during sexual intercourse; and in effective management and treatment of STI (DoH, 2010).

It is with an awareness of the above that South Africa launched a population-wide national cervical cancer control programme in 2001. The goal of the programme was to screen at least 70% of women in the target age group (30 years and older) within the first 10 years of implementing the programme, and to provide at least three free pap smears in a women's lifetime at 10 years intervals. In line with this national policy, the Limpopo Province Department of Health commenced a provincial cervical cancer screening programme in 2001. The objectives of the screening programme are to:

- ✿ Reduce the incidence of cervical cancer by detecting and treating the pre-invasive stage of the disease (National Health Laboratory Services (NHLS, 2001).
- ✿ Reduce the morbidity and mortality associated with cervical cancer and ultimately reduce the excessive expenditure of scarce health funds currently spent on the treatment of invasive cervical cancer (National Guidelines, 2000).
- ✿ The current study article describes the performance of the cervical cancer screening programme in the Limpopo Province between 2007 and 2010. Its main focus was to evaluate the distribution, screening coverage, adequacy of smears and nature of reported cytological abnormalities, using data routinely collected by the NHLS (NHLS, 2001).

1.3 Problem Statement

The cervical cancer prevention and control programme consists of three service delivery components that must be linked together. These components are:



- ✿ Community information and education;
- ✿ Screening services;
- ✿ The diagnostic or treating services planning and managing programme.

South African and worldwide statistics give an indication of the prevalence of these diseases:

- ✿ There were an estimated 529,409 new cases and 274,883 deaths in 2008. About 86% of these cases occurred in developing countries, thus representing 13% of female cancers (WHO, 2010).
- ✿ Worldwide mortality rates of cervical cancer are substantially lower than the incidence, with the ratio of mortality of incidences of 52%.
- ✿ Approximately 3,680 South African women die of cervical cancer every year as noted by to the South African National Cancer Registry (2000/2001). This represents a 96% mortality rate.
- ✿ Approximately one in every 41 women in South Africa will within their lifetime develop cervical cancer (DoH, 2010).

Cancer of the cervix develops over time from precursor lesions which, although seemingly invisible to the naked eye, can be diagnosed by special investigations (cervical cytology or papanicolau smear). Progression of the disease is slow and may take 10 to 20 years before it becomes visible.

1.2 Problem Statement

The DoH adopted and introduced the National Cancer Control Policy, which includes a programme for cervical cancer screening. Approximately 500 patients are seen daily



at Tshilidzini Hospital, with women constituting 53% of the patients, but only 16.2% access cervical cancer screening annually. This indicates an underutilisation of the programme. Thus, access to cervical cancer screening does not reach the majority of women who need it.

A successful cervical cancer control programme requires a high coverage rate of above 80%. This rate has, however, not been achieved at Tshilidzini Hospital (Table 1.1). The majority of women attending Tshilidzini Hospital who develop the disease seek treatment much later when it is at an advanced stage and treatment is no longer effective. Table 1.1 shows the numbers of women who accessed cervical cancer screening at Tshilidzini Hospital and Tshilidzini Gateway Clinic, which is an indication of low cervical cancer screening coverage. Data was retrieved from the District Health Information System (DHIS) from April 2012 – 2013.

Table 1.1 Cervical cancer screening coverage April 2012 - March 2013 in Tshilidzini Hospital

	April	May	June	July	August	September	October	November	December	January	February	March	Total
Tshilidzini Hospital	7	10	5	9	6	4	6	11	4	7	6	6	81
Tshilidzini Gateway	1	21	11	14	10	13	13	19	7	11	8	10	152
Grand Total													233

High incidences of cervical cancer are associated with lack of knowledge of cervical cancer screening or lack of regular cervical cancer screening and follow-up of

abnormalities. The researcher observed a trend of women presenting with late stage of the disease.

1.3 Purpose of the Study

The purpose of this study was to assess the knowledge, attitudes and practices regarding cervical cancer screening among women attending Tshilidzini Hospital in the Limpopo Province.

1.4 Objectives of the Study

The objectives of the study were to:

- ✿ Assess the level of knowledge regarding cervical cancer screening among women attending Tshilidzini Hospital.
- ✿ Evaluate the attitudes of women attending Tshilidzini Hospital regarding cervical cancer screening.
- ✿ Analyse the practices regarding cervical cancer screening among women attending Tshilidzini Hospital.



1.6 Study Questions

This study will answer the following questions:

- ✿ What is the level of knowledge regarding cervical cancer screening among women attending Tshilidzini Hospital?
- ✿ What are the attitudes of women attending Tshilidzini Hospital regarding cervical cancer screening?
- ✿ What are the practices regarding cervical cancer screening among women attending Tshilidzini Hospital?

1.5 Significance of the Study

The study might contribute to the identification of gaps in the utilisation of cervical cancer screening programme. Tshilidzini Hospital might implement the programme effectively; thus benefit the clients, families and the community. The DoH might review and improve the existing framework and policies on cervical cancer screening programme. Health service might improve owing to the dissemination of information regarding cervical cancer screening. The reduction on morbidity and mortality associated with cervical cancer screening might reduce the expenditure on the treatment of this invasive cancer.

1.7 Definitions and Operationalisation of Concepts



1.7.1 Knowledge

Knowledge is the acquisition of complex cognitive processes like perception, learning, communication and individual reasoning. It means a confident understanding of the subject, potentially with the ability to use it for the purpose (Hornby, 2010). In this study, knowledge shall refer to what women know regarding cervical cancer, that is, women who have heard of the pap smear test and knew that it is meant to detect cervical cancer.

1.7.2 Attitudes

The way that one thinks or feels about something (Hornby, 2010). Attitudes in this study shall refer to how women behave towards cervical cancer screening. That is the beliefs and feelings towards undergoing a pap smear.

1.7.3 Practices

The actual application or use of an idea, belief, or method as opposed to theories about such application or use (Hornby, 2010). In this study, practices shall refer to the way women act towards cervical cancer screening.

1.7.4 Women

Adult female humans (Hornby, 2010). In this study, it shall refer to women above 18 years.

1.7.5 Cervical Cancer

This is a cancer that forms in tissues of the cervix (the organ connecting the uterus and vagina) (Hornby, 2010). In this study, cervical cancer refers to the cancer that begins at the cervix and begins to grow uncontrollably.

1.7.6 Screening

It is an evaluation or investigation of something as part of a methodical survey, to assess suitability for a particular role or purpose (Hornby, 2010). In this study, screening refers to the testing of a person or group of women for the presence of a cervical cancer.

2.2 Epidemiology of Cervical Cancer

Cervical cancer is the third most common form of cancer among women worldwide (Parkin, Pisani and Ferlay, 2002). It is estimated that 493,000 new cases and 274,000 deaths occur every year due to this preventable disease (Ferlay, Pisani, and Parkin, 2004). Although cervical cancer is a major cause of mortality and morbidity among women in less developed countries, it is one of the most preventable human cancers, because of its slow progression, cytological identifiable precursors, and effective treatments (Lee, Scott and Ling, 2002). Therefore, population (pap) cervical cytology screening has been used to assist in the reduction of cervical cancer incidence rates dramatically through early detection of premalignant lesions (Nygard, Skare and Thoresen, 2002).

Despite being highly preventable and curable, cancer of the cervix remains a significant health problem, particularly in developing countries (Ferlay et al., 2004). One of the most common cancers reported worldwide are cancers of the cervix and it remains the



CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section reviews the literature on the level of knowledge, attitudes and practices among women with regard to cervical cancer screening. The literature is sorted into four main areas: epidemiology of cervical cancer, the level of knowledge, attitudes and practices among women regarding cervical cancer screening.

2.2 Epidemiology of Cervical Cancer

Cervical cancer is the third most common form of cancer among women worldwide (Parkin, Pisani and Ferlay, 2002). It is estimated that 493,000 new cases and 274,000 deaths occur every year due to this preventable disease (Ferlay, Pisani, and Parkin, 2004). Although cervical cancer is a major cause of mortality and morbidity among women in less developed countries, it is one of the most preventable human cancers, because of its slow progression, cytological identifiable precursors, and effective treatments (Lee, Seow and Ling, 2002). Therefore, papnicolaou (pap) cervical cytology screening has been used to assist in the reduction of cervical cancer incidence rates dramatically through early detection of premalignant lesions (Nygard, Skare and Thoresen, 2002).

Despite being highly preventable and curable, cancer of the cervix remains a significant health problem, particularly in developing countries (Ferlay *et al.*, 2004). One in ten cancers reported worldwide are cancers of the cervix and it remains the



most commonly diagnosed female cancer in sub-Saharan Africa, South and Central America and South and South-East Asia (Pisani, Bray and Parkin, 2002). Globally, over 85% of the annual 560,000 new cases and the 309,000 deaths occur in the developing world (Gracia, 2007). There is a seven-fold variation in incidence and seventeen-fold variation in mortality from cervical cancer between developed and developing regions of the world (Ferlay *et al.*, 2004). Thus, while incidences are declining in most developed and some developing countries due to effective screening programmes, the total burden of cervical cancer is rising in high-risk developing countries in sub-Saharan Africa.

Cervical cancer is a relatively common disease in South Africa (Fonn, Bloch, Mabina, Carpenter and Cronje, 2002). According to the National Cancer Registry (NCR) reports, cervical cancer consistently remains one of the top two most common cancers affecting South African women (NCR, 2001). A total of 4,817 cervical cancer cases were reported to the NCR in 2001. The age-standardized incidence rate (ASIR) of cervical cancer was 26 per 100,000 women. The ASIR increased with the women's age, with 81% of cases occurring in women between 30 and 69 years, and incidence peaking between the ages of 60 and 64 years. The ASIR in white females was significantly lower than in black females. There is a disproportionate burden of the disease in black women, who have a 1 in 29 lifetime risk of developing the disease, probably reflecting the differential exposure to risk factors and access to health screening services (WHO, 2010).

2.2.1 Determinants of Cervical Cancer

The primary underlying cause of cervical cancer is infection with HPV (Snijders *et al.*, 2006). Most HPV infections resolve spontaneously and those which persist may

lead to the development of pre-cancer and It usually takes 10 to 20 years for precursor lesions caused by HPV to develop into invasive cancer.

The key determinants of HPV infection for both men and women are related to sexual behaviour such as early engagement in sexual activity, multiple sexual partners and unprotected intercourse (WHO, 2010). Additional co-factors are active and passive exposure to cigarette smoke, long use of oral and injectable contraceptives and immunosuppression (WHO, 2010).

2.2.2 Deterrents of Cervical Cancer

2.2.2.1 Primary Prevention

Messages to promote abstinence, mutual monogamy and the use of condoms should be improved (Denny, 2006). Women should be advised to desist from smoking. Thus, effective health education messages are necessary to increase the uptake of cervical cancer screening among women. The mass media has played a significant role in the spread of health education promotion. Different types of media such as radio, television and print media have been used. Their use in different settings has been probed and noted that the promotion of cervical cancer screening through the media, increases the uptake, even though it is on a short-term basis (Denny, 2006).

2.2.2.2 Secondary Prevention: Screening

Cervical cancer screening and treatment is justified, based on the general principles of public health screening. It is an important health problem since it has high morbidity and mortality. There must be a defined target population means to identify, invite, screen and follow up women in that population (Peate, 2009).



2.2.2.3 Tertiary Prevention: Intervention and Palliative Care

Health care personnel should be adequately trained to interpret results and know what steps to follow. Referral systems should be in place. Abnormal smear Cervical Intraepithelial Neoplasm (CIN) I or low – grade Squamous Intraepithelial Lesion (SIL) and CIN II and a typical squamous cell of undetermined significance (ASCUS) should have a smear repeated after 12 months. If the diagnosis remains the same or worsens, the affected women should be referred for colposcopy. If the results are negative on the second smear, it should again be repeated after 12 months. CIN II or A typical Grandular Cells of Minded Undetermined Significance (UGUCS) should be referred immediately for colposcopy and if the results are positive the affected women may be treated with cytototherapy or large loop excision of the transformation zone (LLETZ) (WHO, 2002). Pap smear however, has a sensitivity of 51%, which is the ability of a test to detect all those with the disease in the screened population. It thus has a specificity of 98%, which is the ability of a test to identify correctly those free of diseases (Peate, 2009).

2.3 Level of Knowledge Regarding Cervical Cancer Screening Among Women Worldwide

Numerous studies have examined the knowledge levels and possible factors that affect screening behaviour among women in different countries of the world (WHO, 2009). The results have shown that demographic characteristics and knowledge about cervical cancer can affect cervical cancer screening participation (Fylan, 2002). To this date, however, subject willingness, as an intrinsic and predictive factor of individual behaviour, has received very little attention. The majority of women indicated that they were willing to participate in cervical cancer screening and had a higher level of cervical cancer knowledge than women who did not know that HPV



infection is a necessary factor for cervical cancer induction methods and treatments (Fylan, 2002).

Women who were willing to undergo screenings tended to be younger, better educated and have higher incomes (Yao, Shaung, Ru, Hang, Qunying, Ting, Qinghua, Zhilan, Ding and Ling, 2013). According to the study that was conducted in the USA, there was lack of knowledge with regard to both screening itself and the possible causes of cervical cancer. The main causes were seen as higher sexual activity among those aged under 37 and smoking; the majority of women showed preference for a female professional to take smear. The main reasons cited for non-compliance were fear and dislike of the test itself.

A population-based screening programme, even in countries where screening is less than perfect, has significantly decreased the incidences of cervical cancer in large parts of the world. Cervical cancer most often develops in women of age 30 and above to infrequent among women in the fifties and sixties (WHO, 2010)

A majority of women had limited knowledge about cervical cancer. Most of the women had no knowledge about HPV and believed that infections were caused by physical trauma, certain sexual activities as well as that poor hygiene caused cervical cancer. They also believed that they only needed a pap smear if they developed symptoms of a pelvic infection and felt that women who engaged in unwise sexual behaviour, in particular, should receive regular pap smear examinations (McMullin, *et al.*, 2005).

Research on the factors that influence the pap smear by Latin Americans usually falls under two major categories: economic and cultural. Economic factors, in particular

having health insurance, are most important predictors of cervical cancer screening in this population. Many investigations have suggested that the possible role of culture is predicting preventive service use. Some of the issues included language and beliefs about the disease (McMullin, 2005). Cervical cancer among Asian Americans reveals a singular trend in the USA. That is, while incidence rates for all other major racial groups have fallen in recent years, the rate of cervical cancer among Asian Americans alone shows small but significant increases. Death due to cervical cancer is, however, increasing and yet it is considered unnecessary because of the advent of the pap test and its usefulness in early detection and hence to potential treatment (Ayres, Atkins and Lee, 2010).

Cervical cancer is the 16th leading cancer in Australian women. Many Australian women do not understand the risk factor for HPV infection, the clinical problem it may cause and the potential long-term complications of infection (Giles and Gerland, 2006).

Recent studies on the current understanding of HPV indicate the levels of incidence and the need for health education about cervical cancer (WHO, 2010). A survey carried out amongst women who attended a well-known women's clinic in London concluded that only about 30 percent of the women were aware of HIV with fever, half of those who are aware of HPV recognising its link to cervical cancer. Women represent the fastest rising population groups at risk for HIV & AIDS in the USA. Consistent with these statistics, is the fact that cervical cancer became an AIDS designating condition in 1993 (Hoque, 2009). Therefore, there is a need to educate women about HPV so that they can understand the reason behind cervical cancer screening and take steps to reduce their risk of infection with HPV (Hoque, 2009).



Another study conducted among Chinese immigrant women in British Columbia, Canada, revealed that invasive cervical cancer is the second leading cancer among women in mainland China and it is also an important health problem for Chinese immigrants who have a higher incidence and mortality from this disease as compared to the general North American population (Hislop, Ten, Lai, Ralston, Shu and Taylor, 2004). Factors influencing pap screening behaviour in Chinese Canadian women included inadequate pap screening and low knowledge levels about cervical cancer risk factors - especially for those with less education and those who received their usual care from a male doctor. Culturally and linguistically, appropriate education interventions to address pap testing and risk factors for cervical cancer are needed in the Canadian Chinese community, just as educational resources are also needed for their primary care givers (Hislop *et al.*, 2004).

Cervical cancer is the commonest malignancy in Uganda. Cancer is largely preventable by effective screening programmes and the country has achieved a considerable reduction in cervical cancer incidences and deaths. The ideal age for screening should then be 30 – 40 years when women are at the highest risk of precancerous lesion. However, younger women who have been sexually active should be screened as they might have lesions and even cancer, especially if they have HIV infections (Mtyaba *et al.*, 2006)

A 2007 study conducted in Nigeria revealed that women present with late stages of the disease. This study showed that 28.7% of Nigerian women possessed a good knowledge of cervical cancer with 46% of them being aware of what cervical cancer screening was all about. It was revealed that 31.4% of women never had a cervical cancer screening done in the past. Furthermore, a study conducted in Lagos



demonstrated a very low awareness of cervical cancer and absence of cervical cancer screening practices among the female urban slum dwellers (Bologun, Odukoya, Oyediran and Ojum, 2012). It was also noted that women had little knowledge of the risk factors associated with cervical cancer. In addition, the accumulation of evidence of a causative link between HPV and cervical cancer was noted as likely to increase women's feelings of resentment towards their partners and of being tarnished (Fylan, 2002). Thus, the most important factors hindering the use of available cervical cancer screening were lack of knowledge and the feeling that they had no medical problems. The study showed that there was very poor knowledge and practice of cervical cancer screening and free mass screenings are necessary for any successful cervical cancer screening in Nigeria. Hence, to make the most sustainable programme possible, local health providers and other community members worked alongside project staff to create a two part education programme that addressed the knowledge about cervical cancer prevention and promoted acceptance of pap smear screening (Nwankwo, Aniebe, Aquwa and Ahanarado, 2011).

The level of pap smear use among well educated women in the West African city of Accra, the capital city of Ghana, was noted to be very low. The lower pap smear use occurred despite the high level of knowledge about cervical cancer and pap smear compared among these Accra women as compared with women from other African cities. Cervical cancer is, however, the most common female malignancy in Ghana. There is no national screening programme in Ghana, but the teaching hospital and the military hospitals in Accra perform the test and read the smears. The hospital analysis revealed that well educated women in the upper 10 social class had the greatest knowledge about cervical cancer and cervical cancer screening. The study in Ghana showed that less was known about risk factors and screening intervals. It also revealed

that although the relationship between sex and cervical cancer was known, less was known about other risk factors and very little about the link between HPV and cervical cancer (Abotchie, Phil and Shokar, 2009).

A Tanzanian a study indicated that a woman's knowledge was also implicated in screening uptake. Women with low levels of knowledge about cervical cancer and its prevention were unlikely to access screening services. Although awareness may be a significant factor, some women nevertheless, did not seek screening (Lyimo and Beran, 2012).

In addition, despite the high incidences of cervical cancer in Botswana very little information is available regarding women's use of pap smear tests for early detection of the disease. High incidences of cervical cancer are associated with frequent use of pap smear tests (Hoque, 2009) Negative attitudes toward pap smear testing and limited access to health care services.

2.4 Attitudes Towards Cervical Cancer Screening Among Women

The study conducted in Nigeria in 2007 revealed that women presented with the late stage of the disease. The study further showed that women had been reluctant to undergo cervical screening because of the embarrassment felt when exposing their genital organs for public examination and even the fear of cancer results. It revealed that 31.4% of women had never had a cervical cancer screening done in the past. Some of the women did not perceive cervical cancer as a serious disease and 7.3 of them did not even see themselves at risk of contracting the disease despite their being sexually active (Adetola, 2011). The study also confirmed that some men hindered



their wives' involvement in screening as they do not approve of it on the basis of their cultural, religious beliefs and other values (Adetola, 2011).

In Thailand, researchers found that female sex workers with negative attitudes about pap smear services were more likely to have never had a cervical smear taken than those with a positive attitudes.

In Somalia, women developed a negative outlook on screening due to the embarrassment associated with female genital mutilation. Other cultural barriers may lead to negative opinion about exposure of private parts. The sex of the health worker who performs the pap smear test also affects the attitudes of women; therefore, they may prefer one who is a female (Lyimo and Beran, 2013).

A study conducted in Canada, revealed that South Asian women experienced unique social-cultural issues while adjusting to Western societies. Cultural beliefs that ignore preventative medicine create isolation from the community at large and enforced language barriers may interfere with women's access and utilisation for health care. In addition, sexuality is a very sensitive and secretive topic in many Eastern cultures and it is unlikely to be discussed in homes or within small community settings (Chankapa, Pal and Tsering, 2011). It is also interesting to note that despite a growing number of screening programmes across Canada, young women continue to utilise the pap screening programme, but would often not return or do follow up appointments that would have been recommended by their health practitioners (Duffett-leger, Letourneau and Cross, 2008).

A study conducted in the USA indicated that despite the overall downward trend in cervical cancer, there still exists a disparity in mortality rates for cervical cancer

related deaths among certain ages as well as geographic and socio-economic groups. It was noted that lower education, lack of health coverage and rural location are associated with inadequate preventative cervical cancer screening (Uysal and Birsal, 2009). This finding concurs with a study conducted in Turkey, which showed that an increase in the level of education, age increased and the presence of social security, resulted in the frequency of pap smear testings (Uyusal and Birsal, 2009).

Many South Asian women's strong beliefs about cancer as a stigmatising, painful and untreatable disease prevent them from participating in screening. These beliefs also make it difficult for women to accept health care professional concerns about the early detection of cervical cancer. Cervical cancer screening by pap smear lowers the incidence and provides early detection of cervical cancer. As the population of ethnic women increases, it is important to assess whether these women are aware of and are utilising these services (WHO, 2010).

A study conducted in Mexico revealed reasons why women were not obtaining pap smears, including the lack of privacy and knowledge, difficulty in accessing health care and fear that any gynaecological treatment would leave them sexually disabled. Such beliefs are also confirmed in Bolivia, where women believed that cancer was a death sentence (Reyes – Ortiz, Camacho, Amador, Velez, Ottennacher and Makides, 2007).

According to the study conducted in Vanuatu in 2008, general embarrassment and lack of knowledge were the greatest limitations to women's ability and confidence to investigate health concerns. Thus, lack of resources for scientifically trained staff and funding to support on-going testing, treatment follow-up procedures and associated



transport and specimen costs are key limitations in this area of preventive health (Fontinatos, Warmingthon, Walker and Pilben, 2010).

An increase in age has been found to be associated with a decreased use of screening services in several studies carried out in different settings (Hsia, Kemper, Klefer, Zapka, Sofaer and Pettinger, 2000). This has been confirmed in rural India in a study that screened with visual inspection and acetic acid (Sankaranarayanan, Rajkumar, Arross, Theresa, Esmey and Mahe, 2003). It has been suggested that older women may be less responsive to awareness activities because they believe that detection and treatment make no difference to them.

Married women were more likely to be screened as observed in previous studies in India and other low resource settings. Two proposed reasons are, first: married women may receive more obstetric or gynaecological care making them more responsive to reproductive health care (Siahpush and Singh, 2002). Second: a key factor in a woman's decision to participate in cervical cancer prevention services is her husband's positive emotional support (Nene, Jayant, Arrossi, Shastri and Buduk, 2006).

Reasons related to social stigma should also be explored. Cervical cancer is often associated with STI. As a result, unmarried women may refuse to be screened out of fear of the potential social stigma they would suffer, if they have a test perceived to be used for sexually active women (Nene *et al.*, 2006).

Women who are less educated were less likely to participate in screening. Previous research on the relationship between socio-economic factors and the use of health services has shown that education influences screening behaviour through its effects

on income and its association with individual knowledge about cancer screening. It has been shown that women are less likely to be screened when they do not understand what is being asked of them or do not recognise the importance of a given recommendation (WHO, 2002). A study in the UK found that reasons for non-participation included lack of awareness of the benefits of the test, considering oneself as not at risk and fearing embarrassment. The most commonly reported barrier that affected women's willingness to attend screenings was the anticipated feeling of anxiety over the possibilities that the screening would reveal an illness, which indicates that anxiety, may be a negative motivator of screening attendance. These results are consistent with a previous review by Ackerson (2007) that the anxiety is due to a lack of information about the intent of cervical cancer screening. Another important barrier cited by the participants was that an absence of symptoms related to cervical cancer encourages screening behaviours (Ackerson and Grelebeck, 2007).

The focus on health crisis rather than disease prevention is an element of Chinese culture. For the Chinese, as with most Asians, visits to a physician do not occur unless there are obvious abnormalities. This finding is supported by previous studies in which Chinese women appeared to participate in health care initiatives for reasons of illness rather than prevention (Lee *et al.*, 2002). As a result, few Asian women would attend screenings. This phenomenon of irregular hospital visits as noted among Chinese women, and lack of awareness of the benefits of cervical cancer screenings, the fear of deception and pain during screening and the possibility of incurable cervical cancer even if the screening is effective (Fylan, 2002), are some of the barriers to cervical cancer screening.

These barriers draw attention to the need for extensive public education seeking to correct these misconceptions. The education programme must emphasise the fact that cervical cancer screening can detect precancerous lesions that occur early in the course of the cancer and thus be mitigated by certain treatments. Unexpectedly, a few participants declare that their husbands' disapproval of screening was a barrier, a finding that is inconsistent with other studies (Lyimo and Beran, 2012).

Factors that influence screening behaviour can be classified as health service related, patient centres or factors related to colposcopy.

2.4.1 Health-Service Related Problems

Until recently, one of the major obstacles to women participating in cervical screening programmes was administrative errors, particularly incorrect addresses. Although many General Practitioners (GPs) made use of opportunistic screening, this was often performed during contraceptive or obstetric consultations and resulted in post-menopausal women being overlooked (Denny, 2006). However, the introduction of the GP's target payment scheme has meant that it is in the interest of both GPs and patients to ensure that regular cervical screening is achieved. The scheme provides a sliding scale of remuneration with payment depending on the proportion of women aged 20 – 64 years registered with the practice and screened within the previous five years; enhanced payments are made when 80% are screened and lower payments when 50% are screened. The introduction of computerized records by many GPs has also alleviated many administrative problems such as screening history and changes in address. Many women, however, do not participate due to the unavailability of a female screener and due to the fact that most appointments are available only during working hours (Denny, 2006).



2.4.2 Patient-Centred Problems

Reasons women give for not participating in cervical screening programmes include lack of knowledge about the test and its indications. Others consider themselves not to be at risk of developing cervical cancer and fear of embarrassment or pain. In addition, certain groups of women may experience particular problems. Women of low socio-economic status may be less likely to have been screened. There is some evidence that ethnic-minority women, particularly those of Asian origin, are less likely to participate. Finally, post-menopausal women are less likely to be screened regularly, and non-participation may be a result of uncertainty whether the smear test is appropriate for their age group (WHO, 2002).

The receipt of an abnormal cervical smear results and referral for colposcopy causes anxiety and distress in a large number of women. The degree of anxiety experienced, however, varies among women. The most distressing period appears to be the receipt of the abnormal smear result. Women's anxieties diminish following colposcopy and treatment. The primary cause of distress appears to be fear. Many women are frightened of medical procedures and believe that an abnormal smear is indicative of cancer and that their reproductive ability will be threatened. The resulting anxiety can have severe effects on the day-to-day functioning and can result in a depressed mood and decreased libido. The results can also cause changes in self-perception, including impaired body image and lowered self-esteem; women report a feeling of being less attractive, tarnished, let down by their bodies, defiled, contaminated and dirty (Fylan, 2002).

Estimates of the percentages of women who do not attend colposcopy vary, just as the reasons behind the non-compliance. The estimates range between 12% and 50%



depending on the centre and patient population. There are two likely explanations of this non-compliance. First, as compliance is related to the patient's perception of the severity of the disorder, women may not consider the receipt of an abnormal smear as sufficiently serious to comply with health advice. In addition, the affected women may be too distressed to attend as noted from studies that examine women's understanding of, and reactions to, an abnormal cervical smear result. Many women believe they have cancer and fear of cancer remains high throughout subsequent investigations. Those women who do not attend colposcopy show higher levels of anxiety and greater impairment in daily activities than women who do attend (Fylan, 2002).

2.5 Practices Regarding Cervical Cancer Screening Among Women

Presuming that the vaccine remains effective in preventing HPV infections, it is predicted that the vaccination of all women below 25 years will lead to a 60 – 70% reduction in cervical cancer related mortality within 30 years. There is evidence to suggest that the vaccine prevents cervical cancer in women who have already been exposed to HPV. Therefore, the ideal time for human vaccination is prior to the onset of sexual activity and potential exposure to the virus (Shand, Burney and Fletcher, 2010). The incidence of cervical cancer has declined in developed nations due to routine use of cervical cancer screening services (Nwankwo *et al.*, 2011).

In sub-Saharan Africa, cervical cancer comprises of 20 – 25% of all cancer among women. This is about double that of women worldwide. Currently, there are no national cervical cancer service policy guidelines in Tanzania. Screening is a universally accepted early detection strategy, yet, the utilization of screening in many developing countries is still poor (Lyimo and Beran, 2012). Although prevention in



the form of HPV vaccine is shown to be effective, the vaccine is expensive and generally unavailable in low income countries.

The WHO recommended a preventive approach of cervical cancer screening involving a defined referral system for diagnosis treatment and follow-up (Lyimo and Beran, 2012). In developing countries, organised cervical cancer screening or preventive programme are an exception rather than routine, and it is yet to be given consideration by health policy-makers. Most screening tests done so far in Nigeria were opportunistic or spontaneous screenings. The trend has always been for the women to present for treatment with advanced stage disease (Nwankwo *et al.*, 2011).

Another study conducted in South Africa's Kwazulu-Natal Province, Illembe region, revealed that screening efforts in developing countries have had limited success. The reasons behind the limited success include limited screening services, failure of programmes to target or reach women at risk, limited awareness of cervical cancer as a health problem and cultural obstacles to providing services. Kwazulu-Natal has a cervical cancer screening policy which aims to detect women at risk of developing cancer. The cervical cancer screening policy states that cervical cancer screening will be available to all women from the age of 30 years at intervals of 10 years, provided no smear has been taken within the previous five years (Sibiya and Grainge, 2007).

A study conducted in Pretoria provided evidence that women were not able to protect themselves from cervical cancer by insisting on condom use, poverty and physical abuse. A primary prevention strategy should focus on empowering women to protect themselves from cervical cancer (Maree, 2007). The South African government changed the focus on health care provision from curative to the preventive health care



(PHC) approach (Moekeng *et al.*, 2010). According to the alliance for cervical cancer prevention (2007), every woman has the right to cervical cancer screening at least once in her lifetime (Moekeng, *et al.*, 2010).

The Tshwane University of Technology study suggested that a large number of women included in the study were at risk of contracting STI or cervical cancer in later life due to lack of knowledge and awareness about cervical cancer. The study provided evidence that women were not able to protect themselves from cervical cancer by insisting on condom use. These women lacked knowledge about cervical cancer and therefore could not associate condom use with self-protection against the disease (Maree and Wringt, 2007). The transmission of knowledge should be done in such a way that it also manifests in healthy behaviour by women - only if the women are knowledgeable to such an extent that they are also willing to act and change their behaviours, can their health be promoted and will they be able to take responsibility for their own health (Maree and Wringt, 2007).

According to the study conducted by Mangosuthu University of Technology in Durban, South Africa, about 60% of college age women had some form of HPV which is linked to cervical cancer (Hoque, 2010). The study further revealed that the majority of women were young and sexually active at 17 years. The study found that there was a high prevalence of the major risk factors for cervical cancer among the respondents. The risks included initiation of coitus before 18 years, multiple sexual partners, previous history of sexually transmitted disease and vulva warts. Risky behaviour, lack of knowledge and preventive care such as regular pap tests lead to a high incidence of HPV infection and cervical cancer in college women. Lack of HPV knowledge coupled with misperception about susceptibility impacted college students



on attitudes and behaviours regarding cervical cancer prevention. The study also revealed that students had never heard of HPV infection and were unaware of related cervical cancer risk (Hoque, 2010). The very same study further indicated that women of poorer communities were mostly affected with the disease (Hoque, 2010).

A study conducted in Mexico evaluated knowledge about the aetiology and prevention of cervical cancer among undergraduate medical and nursing students. It revealed that students knew theoretical concepts about cervical cancer. However, it seemed that they did not receive the specific elements about the practice (Hoque, 2010).

A study in Botswana found that only 40% of study participants had had pap smear tests (McFarland, 2003). This finding of low participation of cervical cancer screening and low follow-up of screening is consistent with most other studies done in less developed countries which reported a participation rate of 23%. Among others, the reason for low participation include at risk women not perceiving themselves as being susceptible to cervical cancer provided they have no symptoms. There is also a lack of information about the benefits of cervical cancer screening and misconceptions like thinking it is painful or takes away virginity (Hoque, 2010). Although most participants perceived cervical cancer as serious, the thought of believing that there was no treatment of cervical cancer made them uninterested in cervical cancer screening (Hoque, 2010).

Limited communication between doctors and patients may underlie the reports of poor participation of women from ethnic minorities, particularly those of Asian origin (Health Education Authority, 1994). This is supported by findings of unscreened

Mexican – American women being less likely to speak English or aware of cancer signs, symptoms, risk factors and screening guidelines than screened regularly (Hoque, 2010). Indeed, non-English speaking women were noted to be enthusiastic about the cervical screening programme when the nature of the test is explained in their own language (Hoque, 2010).

3.1 Study Design

Quantitative research is an overall plan, recipe or blueprint used for conducting a research study as a whole (De Vos, Strydom, Fouche and Deppa, 2011; Burns and Grove, 2009). Thus, a quantitative, cross-sectional study which takes the form of a survey will be adopted to assess the knowledge, attitudes and practices of women above 14 years attending Tzafanani Hospital regarding cervical cancer screening.

3.2 Study Setting

Tzafanani is a regional hospital situated about 5 km west of Thobayindeni Town in the Vhembe District, Limpopo Province, and about 70 km east of Makhado Town. It covers an area of approximately 10 square kilometres. The hospital offers outpatient and inpatient services to the population of approximately 1.3 million of the Thulamela District, serving roughly an estimated 50% of the population. It serves as a referral facility to 24 health facilities in the sub-district's 2 district hospitals, 16 clinics and 3 health centres. Tzafanani Hospital has 53 doctors of whom 5 are specialists, 6 dentists, 24 physiotherapists, 106 enrolled nurses and 171 auxiliary nurses (Table 3.1). The study was done at Tzafanani Hospital in the Vhembe District of Limpopo Province, which is shown in Figure 3.1). The hospital was chosen because it runs both inpatient and outpatient services, with an average of approximately 110 patients seen in the out-patient department daily. It has a good information management system in

CHAPTER 3

METHODOLOGY

3.1 Study Design

Quantitative research is an overall plan, recipe or blueprint used for conducting a research study as a whole (De Vos, Strydom, Fouche and Delport, 2011; Burns and Grove, 2009). Thus, a quantitative, cross-sectional study which takes the form of a survey will be adopted to assess the knowledge, attitudes and practices of women above 18 years attending Tshilidzini Hospital regarding cervical cancer screening.

3.2 Study Setting

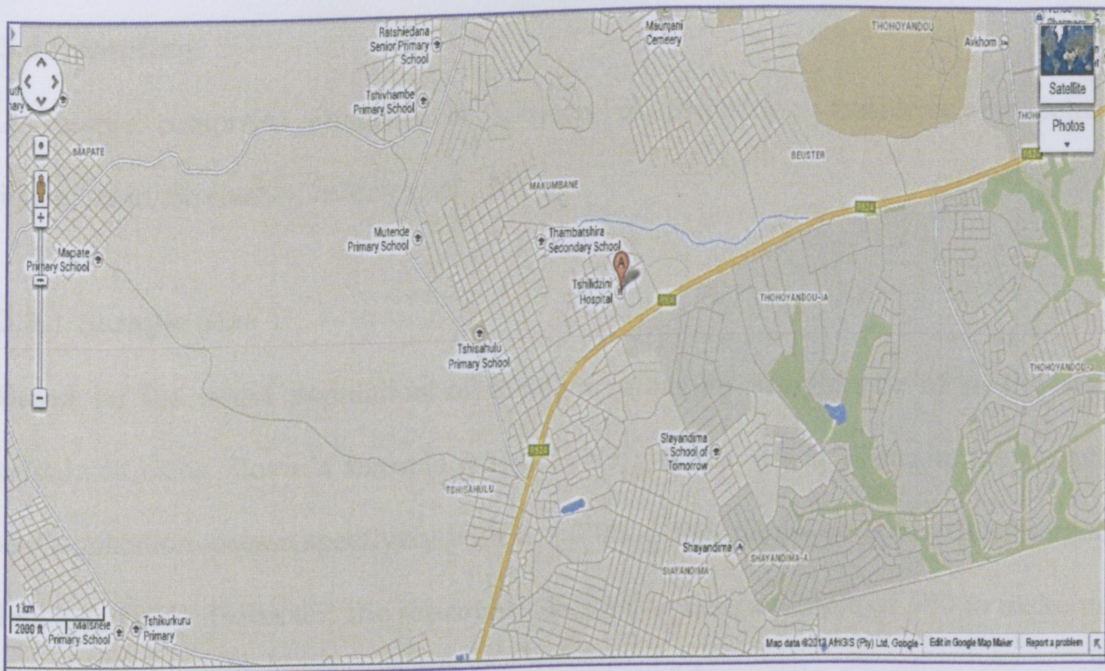
Tshilidzini is a regional Hospital situated about 8 km west of Thohoyandou Town in the Vhembe District, Limpopo Province, and about 70 km east of Makhado Town. It covers an area of approximately 10 square kilometres. The hospital offers outpatient and inpatient services to the population of approximately 1.5 million of the Thulamela B Municipality. Women constitute an estimated 53% of the population. It serves as a referral facility to 28 health facilities in the sub district's 2 district hospitals, 16 clinics and 8 mobile clinics. Tshilidzini Hospital has 53 doctors of whom 5 are specialists, 6 dentists, 284 professional nurses, 168 enrolled nurses and 171 auxiliary nurses (Table 3.1). The study was done at Tshilidzini Hospital in the Vhembe District of Limpopo Province, South Africa (Figure 3.1). The hospital was chosen because it runs both outpatient and inpatient services, with an average of approximately 310 patients seen in Out-Patients department daily. It has a good information management system in

place that enables the capturing and retrieval of relevant information with some degree of accuracy and reliability.

Gateway Clinic was opened in December 2006. It operates within the hospital (Tshilidzini) and attends to non-emergency services. This clinic caters for all types of primary health care services, such as family planning, chronic illness management, antenatal care, well-baby service, minor ailments, HIV & AIDS and mental health. The clinic does not provide maternity and ARV services. The population living near the facility are from both informal and formal settlements. Tshilidzini Gateway provides 10 hour services a day and 7 days a week. It opens at 07h00 and closes at 18h00. An average of 180 to 240 patients is seen daily at the clinic.

Table 3.1: Tshilidzini Hospital (setting) 2012 – 2013 staff establishment

Category	Filled Posts
Specialist Doctors	5
Medical Officers, Intern and Community Service	48
Dentists	6
Operational Manager Specialists	8
Assistant Manager Specialists	3
Operational General Manager	18
Assistant Operational General Manager	3
Professional Nurse Specialists	102
Professional General Nurses	149
Staff Nurses	167
Nursing Assistants	177
Professional Community Service	1



(Source: Vhembe District Municipality News Letter, 2006)

Figure 3.1: Map of the Vhembe District showing Tshilidzini Hospital

3.3 Study Population

Population refers to individuals in the universe who possess specific characteristics and it is the totality of persons, events, organisations, units, cases, records or other sampling units with which the research problem is concerned (De Vos *et al.*, 2011). The target population for this study were all women attending Tshilidzini Hospital Out Patients department who were above the age of 18 years. Female adult patients were recruited for this study at Out Patients department and Tshilidzi Gateway Clinic.

According to statistics the total number of women seen at THOPD and TGC were estimated to be 9868 monthly.

3.4 Sampling

A sample comprises elements or subjects of population considered for actual inclusion in the study (De Vos *et al.*, 2011).

3.4.1 Sample Size

Based on the target population of 9868, a minimum sample size of $n=384$ was calculated using Slovin's formula [$n=N/(1+Ne^2)$] where n and N denote the sample and population sizes respectively with $e = 0.05$ as the margin of error (Guilford and Frucher, 1973). However, the researcher decided to take a sample of 500 to make up for non-responses and increase representativeness of the sample.

3.4.2 Sampling Approach and Technique

Non-probability purposive sampling method was used in this study as it was more convenient and economical for the researcher. A total of 500 women were recruited to the study. All women above the age of 18 years were included in a sample until 500 had been studied. Women below 18 years and those above 18 years who refused to participate were not included in the study.

3.4.2.1 Instrument

A structured questionnaire (Appendix 1) was used as the instrument to collect data. The questionnaire contained close-ended questions to measure the knowledge, attitudes and practices of women aged 18 years and older at Tshilidzini Hospital. The questionnaire was written in English and given to a language expert to translate it into Tshivenda (Appendix 2). It was back translated into English by a language expert to



ensure that it retains original content. The questionnaire was divided into four sections, which are demographic profile of the participants and level of knowledge, attitudes and practices regarding cervical cancer prevention.

3.4.2.2 Pre-Testing of the Instrument

According to Grimm (2010), pre-testing is an absolute necessary step in survey research because it ensures that all kinds of errors that are associated with the survey research get reduced. In this study, pre-testing was undertaken to improve the quality of data to be collected. In this study, a pre-test was small scale study which was conducted prior to the main study on participants similar to those who were used in the study. The researcher used the results of the pre-test to check the feasibility of the study, identify problems in the design and sequence of questions, including the procedure for recording responses, time and money spent and corrections that could be made (Brink, 2008; Burns and Grove, 2003; Stommel and Willis, 2004). The pre-test was conducted at Tshilidzini Hospital with 50 women above the age of 18 years and the respondents were not included in the main study to ensure the validity and reliability of the study.

3.5 Data Collection

Data collection was done at THOPD and TGC. The researcher administered the questionnaire to the women who volunteered to participate in the study. Women who could complete the questionnaire by themselves were given the questionnaire to complete. Those who could not read and write were assisted to complete the questionnaire during August 2014.

3.6 Data Analysis

Data were gathered by hand-posted questionnaire and quantitatively processed using the Statistical Package for Social Sciences (SPSS, Version 22). Frequency tables were the main method of data presentation. Analysis involved simple descriptive statistics and correlations. Interpretation of the results follows the analyses and tentative findings are also stated.

Data were coded to reduce its complexity. All data from the questionnaire were coded using a code sheet. Data was summarised and presented in the form of tables and charts such as bar charts. Correlation analysis was also done to test the interdependence of important variables.

Data was processed further through cross-tabulations of some selected questions. Cross-tabulation is a statistical process that summarises categorical data to create a contingency table. Cross-tabulations provide a basic picture of the interrelation between two variables and can help find interactions between them. In this study cross-tabulations were intended to find how respondents answered certain related questions.

3.7 Ethical Considerations

3.7.1 Permission to Conduct the Research

The proposal was first presented to the School of Health Sciences Higher Degrees Committee. It was also presented to the University Higher Degree Committee (UHDC) for assessment to obtain ethical clearance and then submitted to the Department of Health Limpopo Province to obtain permission before collecting data at the hospital. The letter of permission (Appendix 7) from the province was submitted to the chief executive officer of Tshilidzini Hospital.

3.7.2 Authorization

The authorization for data collection was obtained from the Head of Department at the Limpopo Provincial Department of Health together with the facility managers of Tshilidzini Hospital.

3.7.3 Informed Consent

Participants were informed of the nature and benefits of the study. These included the maintenance of anonymity, confidentiality and privacy. A consent form (Appendix 4) was given to each participant to complete. Each of the participants was informed that their participation was voluntary. An information leaflet (Appendix 3) was translated into the local language (Tshivenda) that was considered to be common in the community. It was made available in addition to the English version.

The information leaflets and consent forms for service providers and facility managers were written only in English. Each participant was allowed to read and complete the questionnaire in the language with which s/he was most comfortable with and using simple terms. Participants were informed that there were no

remuneration (Burns and Grove, 2003). Those who agreed to participate in the study were given details of the study, including the purpose. That was followed by signing of the consent form by each participant. In signing the consent form participant were informed about their rights to withdraw from the study if they so wished, without punishment or repercussions.

3.7.4 Confidentiality and Anonymity

Information provided by the subjects were treated as confidential and under no circumstances would it be divulged or made available to any other person, except the researcher or only unless the researcher had been given explicit permission by the participants to share the information. The questionnaires submitted by respondents which contain the information were kept under lock and key by the researcher. Participants were advised not to write their names on the questionnaire in order to ensure complete anonymity. The questionnaire was thus completed anonymously. The participants were left to answer the questionnaire in the absence of the researcher. If anonymity was threatened, such record was destroyed immediately. The subject's identity would not be made available in reports and research publications. Informed consent was separated from the questionnaire so that no person could be linked to any questionnaire. Each subject questionnaire had a number and not a name. The original questionnaire was kept under lock and key by the researcher. The data was analysed in groups and not individually to avoid identifying participants by their responses (Brink, 2008).



CHAPTER 4

3.7.5 Right to Fair Treatment

This right was based on the ethical principle of justice and includes the right to fair selection of participants and treatment. The researcher selected a population that had autonomy in order to make a decision on whether or not to participate and give consent. All participants in the study were treated with dignity and respect (Burns and Grove, 2003).

3.8 Limitations of the Study

It would have been better to do a population survey in different hospitals, but due to the high cost of a population survey, the research was only done at Tshildzini Hospital. All women above the age of 18 were researched. That showed that the scope was limited and the results were vital in establishing a basis for comparing the prevalence in other hospitals. Another limitation could be the instrument which was a questionnaire - some of the participants might have chosen not to answer certain questions due to personal reasons.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 Demographics of the Respondents

The purpose of this chapter is to present the findings of the study. Demographic data collected included age, skill, educational level, occupation, frequency of visiting clinic, medical aid and chronic diseases. Table 4.1 shows that of the 500 respondents, 37 (7.4%) were below the age of 20, 258 (51.6%) were in the range 20 to 30, 91 (18.2%) were in the age range 30 to 40, 61 (12.2%) were aged 40 to 50 and those aged above 50 constituted 53 (10.6%). The majority of the respondents were in the age range 20 to 30.

Table 4.1: Age of the respondents (n=500)

Age (Years)	Frequency	%
Below 20	37	7.4
20 – 30	258	51.6
30 – 40	91	18.2
40 – 50	61	12.2
Above 50	53	10.6
Total	500	100

Educational level is an important factor in cervical cancer screening. As a result, data for educational level was collected using Question 32. Table 4.2 shows the distribution of the respondents' educational level.

Table 4.2: Educational level of the respondents (n=500)

Educational Level	Frequency	%
Never Schooled	12	2.4
Up to Grade 7	78	15.6
Up to Grade 12	298	59.6
<i>College Certificate</i>	63	12.6
Technikon Diploma	33	6.6
Degree	16	3.2
Total	500	100

The majority (97.6%) of the respondents were schooled. Among those schooled, 59.6% had educational level up to Grade 12. The remainder (38%) had educational level above Grade 12. This means that the majority of the respondents in this study were schooled and most likely understand the need for good health.

The results in Table 4.3 show that 231 respondents (46.3%) were not married, 160 (32%) were married, 66 (13.2%) were living together, the remainder were either divorced 21 (4.2%) or widows 22 (4.4%). In this study, marital status will be evaluated as a factor that may influence the level of knowledge of cervical cancer.

Table 4.3: Marital status of the respondents (n=500)

Marital Status	Frequency	%
Single	231	46.2
Living Together	66	13.2
Married	160	32
Divorced	21	4.2
Widow	22	4.4
Total	500	100

An individual's occupation could be a determinant factor in one's personal health and the need to acquire knowledge on cervical cancer. In this study, the data was sourced using Question 33 and the results are shown in Table 4.4.

Table 4.4: Occupational status of the respondents (n=500)

Occupation	Frequency	%
Housewife	52	10.4
Self-Employed	11	2.2
Skilled	73	14.6
Student	121	24.2
Unemployed	145	29
Unskilled	98	19.6
Total	500	100

The results in Table 4.4 indicate that 52 (10.4%) of the respondents were housewives, 11 (2.2%) self-employed, 73 (14.6%) skilled, 121 (24.2%) students, 145 (29%) unemployed and 98 (19.6%) unskilled. A majority of the respondents were either students or unemployed.

The hospital normally conducts educational sessions on a variety of topical health issues. These sessions are held with those who visit the hospital. Women are encouraged to attend these sessions upon arriving to the hospital. Cervical cancer screening is one of the topics frequently talked about during such sessions. Individuals who attend these sessions are expected to have knowledge on cancer screening. In this study, it was important to determine the frequency of each respondent's visit to the hospital. Question 36 was intended to source data about the frequency of visits to the hospital. The results in Table 4.5 were obtained from processing the questionnaire data.

Table 4.5: Frequency of respondents' visits to hospital (n=500)

Visits	Frequency	%
Once a Week	1	0.2
Once a Month	140	28.0
Once Every 2 Months	184	36.8
Once Every 6 Months	113	22.6
Once a Year	62	12.4
Total	500	100

The results in Table 4.5 indicate that only 1 person visited the hospital weekly. The number of respondents who visited the hospital once a month is 140 (28%), once in two months 184 (36.8%), once in 6 months 113 (22.6%) and 62 (12.4) visited the hospital once in a year. The majority of the respondents visited the hospital either once a month or once in two months. These respondents are likely to have attended the sessions at least once a month and have acquired information on cervical cancer screening.

The study sourced information on membership of a medical aid scheme from the respondents. The results are shown on Table 4.6.

Table 4.6: Medical aid membership status of the respondents (n=500)

Medical Aid	Frequency	%
No	450	90
Yes	50	10
Total	500	100

The majority 450 (90%) of the women who visited the hospital did not have a medical aid membership. Only 50 (10%) had medical aid. These results suggest that women who are likely to visit the hospital are those without medical aid.

Chronic diseases are always discussed at sessions held at the hospital. Those women who attend the sessions are expected to be knowledgeable about chronic diseases. In this study, Question 38 requested respondents to indicate whether they had chronic diseases. The results are summarised in Table 4.7. Of the 500 respondents, 438 (87.6%) indicated that they did not have chronic diseases, while 62 (12.4%) indicated that they have such disease. The results are not conclusive about the respondents' knowledge on chronic diseases.

Table 4.7: Chronic disease status of the respondents (n=500)

Chronic Diseases	Frequency	%
No	438	87.6
Yes	62	12.4
Total	500	100

Respondents were also asked about their family history of cancer. Question 40 was intended to extract such data from the respondents. The results are shown in Table 4.8.

Table 4.8: Respondents' family history of cancer (n=500)

Family History of Cancer	Frequency	%
No	451	90.2
Yes	49	9.8
Total	500	100

Respondents who indicated that they have a family history of cancer were asked to indicate the type of cancer they were familiar with. Figure 4.1 shows the distribution of the types of cancer indicated to Question 41 by the respondents.

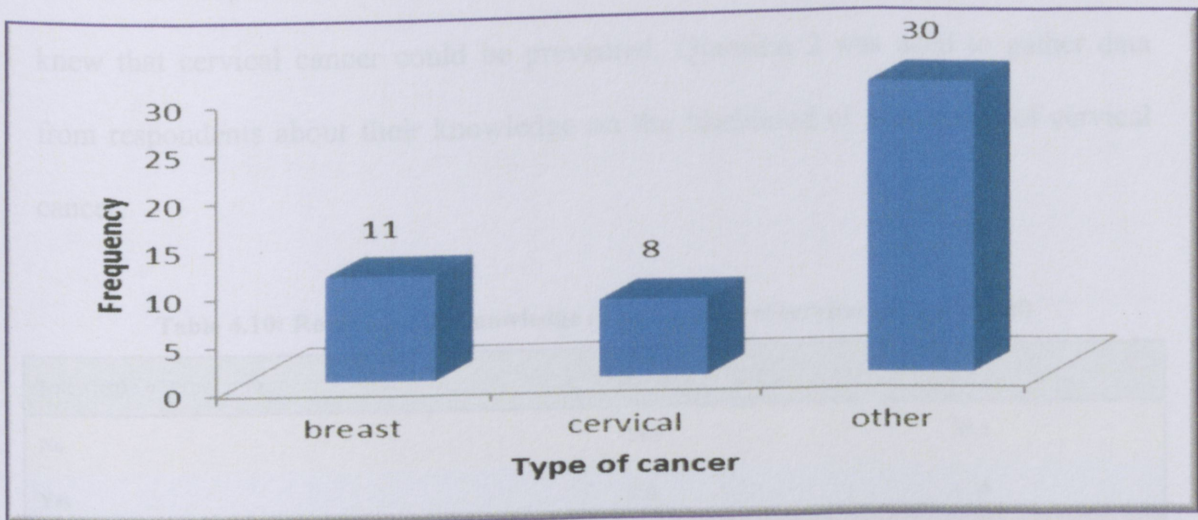


Figure 4.1: Types of cancer indicated by respondents

4.2 Cervical Cancer Screening Related Knowledge

Questions under this section were meant to access the respondents' knowledge on cervical screening. Each of the tables in this summarises the responses to questions asked in this section. Question 1 was meant to gather data on whether respondents have heard about cervical cancer. The results are shown in Table 4.9.

Table 4.9: Respondents' awareness of cervical cancer (n=500)

Awareness of Cervical Cancer	Frequency	%
No	112	22.4
Yes	388	77.6
Total	500	100



The majority of the respondents 388 (77.6%) indicated that they have heard about cervical cancer, while 112 (22.4%) respondents were not aware of cervical cancer. Therefore, the female population in this study had some knowledge about the existence of cervical cancer.

It was also important to find out whether women who participated in this research knew that cervical cancer could be prevented. Question 2 was used to gather data from respondents about their knowledge on the likelihood of prevention of cervical cancer.

Table 4.10: Respondents' knowledge of prevention of cervical cancer n=500)

Knowledge of Prevention	Frequency	%
No	292	58.4
Yes	208	41.6
Total	500	100

The results show that 292 respondents (58.4%) did not know that cervical cancer was preventable, 208 (41.6%) had knowledge of the possibility of preventing cervical cancer. It could be observed that the sample had a sizable number of women who had knowledge on the prevention of cervical cancer.

Besides being aware of the existence of cervical cancer, respondents were asked whether they were aware of the fact that cervical cancer was preventable. A cross-tabulation of Question 1 and Question 2 was done. The results obtained are shown in Table 4.11.



Table 4.11: Cross-tabulation of awareness of cervical cancer and its preventability*

	Q2: Do you know that cervical cancer is preventable?		Total
	No	Yes	
Q1: Have you ever heard about cervical cancer?	180	208	388
%	46.4	53.6	100

(*n=388)

Table 4.11 shows that of the 388 respondents who replied that they heard about cervical cancer in Question 1, 180 (46.4%) were unaware that cervical cancer could be prevented while 208 (53.6%) were aware that cervical cancer could be prevented. The results show that some women who knew about the existence of cancer, did not know that it was preventable. This piece of vital information was not being communicated among women as it could be expected.

Women who have heard about cervical cancer could have been aware of other women with cervical cancer. The study sought data from those women to check whether they knew anyone with cervical cancer. Question 3 was intended to seek such data. The results are shown in Table 4.12.

Table 4.12: Respondents who knew anyone with cervical cancer (n=500)

Respondents' Indication	Frequency	%
No	412	92.4
Yes	88	17.6
Total	500	100

The majority of the women (412; 92.4%) did not know anyone with cervical cancer, but 88 (17.6%) confirmed that they knew other women with cervical cancer. The

results indicate that some women were knowledgeable to determine the cervical cancer status of other women or were confidants of those with cancer.

Cervical cancer is diagnosed using a pap smear, a practice carried out on women at hospitals and clinics. The knowledge of pap smear was deemed important among women. This required sourcing data through Question 4. The results for the question are displayed in Table 4.13. The results show that 383 (76.6%) respondents had heard about a pap smear, while 117 (23.4%) respondents had not heard about this diagnostic procedure. The majority of the respondents had heard about pap smear. Therefore, women in this sample had knowledge about a pap smear.

Table 4.13: Respondents' knowledge about pap smear (n=500)

Knowledge about Pap Smear	Frequency	%
No	117	23.4
Yes	383	76.6
Total	500	100

However, the results do not indicate which respondents were aware or not aware of a pap smear. To overcome this problem, a cross-tabulation of Questions 1 and 4 was carried out and the results shown in Table 4.14.

Table 4.14: Cross-tabulation of cervical cancer and pap smear awareness

		Q4: Have you ever heard about pap smear?				Total
		No		Yes		
Q1: Have you ever heard about cervical cancer?		Frequency	%	Frequency	%	
	No	95	19	17	3.4	112
	Yes	22	4.4	366	73.2	388
Total	117	23.4	383	76.6	500	

The results show the respondents' mixed reactions, that is, 95 (19%) of the respondents did not hear about cervical cancer and pap smear, 17 respondents (3.4%) have not heard about cervical cancer, but have heard about pap smear, 22 respondents (4.4%) have heard about cervical cancer, but did not know anything about pap smear, 366 respondents (73.2%) knew about both cervical cancer and pap smear. The results indicate a high level of knowledge (awareness) of both cervical cancer and pap smear among the population being researched. These results also show that some of the women who did not know about cervical cancer knew what a pap smear was. The results further show that not all women who knew about cervical cancer knew about pap smear.

After establishing the knowledge of cervical cancer and pap smear, it was also crucial to ascertain how the respondents got the information. Question 5 was designed to obtain data for this aspect. Table 4.15 shows the results of the source of the information on pap smear.

Table 4.15: Source of pap smear information (n=500)

Source	Frequency	%
Doctor	28	7.1
Family	23	5.8
Friends	31	7.9
General Practitioner	3	0.8
Health Professional	2	0.5
Media	85	21.6
Nurse	222	56.3
Total	394	100



The results in Table 4.15 show that 106 respondents (21.2%) did not indicate their source of information. It can be seen from the results that nurses 222 (44.4%) are the main source of information about pap smear. The media was the second most prominent source (85.2%). Other sources also contributed to the awareness of pap smear. However, the contribution made by general practitioners (GPs) and health professionals (HPs) seems to be insignificant in this study. Therefore, for the general populace, nurses and the media are the major sources of information of pap smear.

Risk of cervical cancer was also investigated through Question 10. Respondents' answers are shown in Table 4.16.

Table 4.16: Distribution of responses on risks of cervical cancer (n=500)

Response	Frequency	%
Don't know	199	39.8
No	119	23.8
Yes	182	36.4
Total	500	100

The results indicate that 199 (39.8%) respondents did not know whether they were at risk of cervical cancer, 119 (23.8%) respondents indicated that they were sure that they were not at risk at all from cervical cancer, and 182 (36.4%) respondents also indicated that they were at high risk of cervical cancer. The respondents who indicated that they were not at risk of cervical cancer could have been the same respondents who were not aware of cervical cancer. Overall, the results show the precariousness of cervical cancer in which those who confirmed that they were at risk and those who did not know constitute up to 76% of the sample.

Question 10 was cross tabulated with Question 1 to find out how respondents answered Question 1 and Question 10. The results in Table 4.17 confirm those in Table 4.15 that among the respondents who had knowledge about cervical cancer, 147 respondents (29.4%) did not know whether they were at risk of cervical cancer, 24 respondents who did not know anything about cervical cancer also indicated that they were not at risk to cervical cancer. Some of the respondents who did not know about cervical cancer confirmed that they were at high risk of the disease.

Table 4.17: Cross-tabulation of Question 1 and Question 10 (n=500)

		Q10: Do you think you are at high risk of cervical cancer?						Total
		Don't know		No		Yes		
		F	%	F	%	F	%	
Q1: Have you ever heard about cervical cancer?	No	83	16.6	24	4.8	5	1	112
	Yes	147	29.4	102	20.4	139	27.8	388
	Total	230	46	126	25.2	144	28.8	500

F=Frequency

Respondents were also requested to indicate what they thought was the reason for doing a pap smear. A number of options were provided from which they could choose. Figure 4.2 shows the results obtained for Question 11.

Question 10 was cross tabulated with Question 1 to find out how respondents answered Question 1 and Question 10. The results in Table 4.17 confirm those in Table 4.15 that among the respondents who had knowledge about cervical cancer, 147 respondents (29.4%) did not know whether they were at risk of cervical cancer, 24 respondents who did not know anything about cervical cancer also indicated that they were not at risk to cervical cancer. Some of the respondents who did not know about cervical cancer confirmed that they were at high risk of the disease.

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		Q10: Do you think you are at high risk of cervical cancer?						Total
		Don't know		No		Yes		
		F	%	F	%	F	%	
Q1: Have you ever heard about cervical cancer?	No	83	16.6	24	4.8	5	1	112
	Yes	147	29.4	102	20.4	139	27.8	388
	Total	230	46	126	25.2	144	28.8	500

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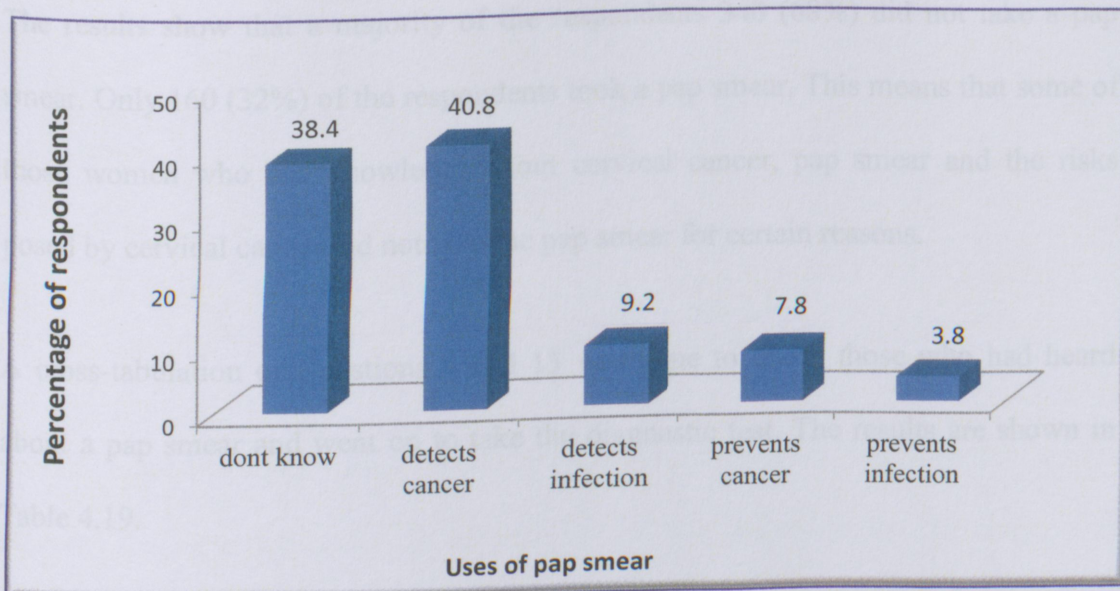


Figure 4.2: Uses of pap smears

From Figure 4.2, it can be noted that 38.4% of the respondents did not know the use of pap smear, 40.8% of the respondents indicated that pap smears were used to detect cancer, 9.2% of the respondents indicated that pap smears were used detect infection, 7.8% said pap smears were used to prevent cancer and 3.8% of the respondents said pap smears were used to prevent infection. The results show that the sample had individuals who were knowledgeable on the use of pap smear in detecting cancer. The result also indicates that some of the respondents who knew pap smear, did not know their use.

This research sought to find out whether women take pap smear. To ascertain this, Question 13 was used to source for data from the sample. The results of Question 13 are shown on Table 4.18 below.

Table 4.18: Distribution of respondents who did/did not take pap smear (n=500)

Took pap smear	Frequency	%
No	340	68
Yes	160	32
Total	500	100

The results show that a majority of the respondents 340 (68%) did not take a pap smear. Only 160 (32%) of the respondents took a pap smear. This means that some of those women who had knowledge about cervical cancer, pap smear and the risks posed by cervical cancer did not take the pap smear for certain reasons.

A cross-tabulation of Questions 4 and 13 was done to check those who had heard about a pap smear and went on to take the diagnostic test. The results are shown in Table 4.19.

Table 4.19: Cross-tabulation of respondents who heard about pap smear and then took a pap smear (n=383)

Heard about pap smear	Took pap smear				Total	
	No		Yes			
	Frequency	%	Frequency	%		
Yes	228	58.8	160	41.2	388	100.00
Total	228	58.8	160	41.2	388	100

The results show that 228 (58.8%) respondents who indicated that they heard about pap smear did not take one and 160 (41.2%) respondents who heard about pap smear took one. It can be deduced that a number of women who heard about pap smear took one and they are likely to be aware of their cervical cancer status.

As a follow-up to Questions 11 and 13, it was also important to find out whether respondents knew that a pap smear could be used to diagnose cervical cancer. Question 14 was designed to find out whether respondents knew that cervical cancer could be diagnosed using a pap smear. The results are shown Table 4.20.

Table 4.20: Responses on cervical cancer using Pap smear (n=500)

Response	Frequency	%
Don't know	186	37.2
No	68	13.6
Yes	246	49.2
Total	500	100

Of the respondents sampled, 186 (37.2%) did not know that cervical cancer can be diagnosed using a pap smear, 68 respondents (13.6%) indicated that cervical cancer could not be diagnosed using pap smear. However, 246 (49.2%) respondents were aware that cervical cancer could be diagnosed using a pap smear. The results show that 50.8% of the respondents were either ignorant or misinformed of how cervical cancer could be diagnosed. The majority of those who did not know about the diagnoses of cervical cancer were likely to be those who were aware of the existence of cervical cancer and the use of the pap smear. The knowledge on the diagnoses of cervical cancer was clearly lacking among the respondents, including some of those who claimed to know cervical cancer and pap smear.

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4.3 Attitudes

Attitudes play an important part in how people view the world around them and also how they will behave in future towards certain activities. In this study, the respondents' attitude towards cervical cancer and getting tested were investigated using Questions 15 to 22. The results are presented in Tables 4.21 to 4.26.

Table 4.21 shows the respondents' attitudes on getting cervical cancer.

Table 4.21: Respondents' worried about getting cervical cancer (n=500)

Item	Frequency	%
Strongly Agree	33	6.6
Agree	186	37.2
Neutral	73	14.6
Disagree	191	38.2
Strongly Disagree	17	3.4
Total	500	100

A small number of respondents 33 (6.6%) strongly agreed that they were worried about getting cervical cancer, a relatively large number of respondents 186 (37.2%) agreed that they were worried about getting cervical cancer, 73 (14.6%) were not concerned about getting cervical cancer. In addition, 191 (38.2%) respondents disagreed about being worried of getting cervical cancer, the remainder 17(3.4%) respondents strongly disagreed that they were worried about getting cervical cancer. It can be deduced that there is no clear cut answer with respect to the attitudes of respondents on getting cervical cancer.

Cervical cancer is detected using a pap smear which is normally administered at the hospital. One's preparedness to take a pap smear depends on one's attitude towards the pap smear. Question 16 was designed to measure the attitude of women towards taking a pap smear. The results in Table 4.22 show the attitudes of respondents towards taking a pap smear.

Table 4.22: Respondents' attitudes towards taking a pap smear (n= 500)

Item	Frequency	%
Strongly Agree	12	2.4
Agree	150	30.0
Neutral	43	8.6
Disagree	246	49.2
Strongly Disagree	49	9.8
Total	500	100

The results show that 12 (2.4%) respondents strongly agreed that they were afraid of taking a pap smear, 150 (30%) agreed that they were scared of taking a pap smear, 43 (8.6%) were undecided on their attitudes towards taking a pap smear, 246 (49.2%) respondents disagreed that they were afraid of taking a pap smear, the remainder 49 (9.8%) strongly disagreed that they were afraid of taking a pap smear. The results show that 60% of the respondents were not afraid of taking a pap smear. This indicates a positive attitude towards taking a pap smear. This is in contrast with Question 13, where the majority of the respondents indicated that they did not take a pap smear. It can be deduced that the respondents have a positive attitude towards taking a pap smear, but are not ready to take one.

There are risks associated with cervical cancer. Question 10 requested respondents to indicate whether they were at risk of cervical cancer. Question 17 is a follow-up to Question 10. In Question 17, respondents were asked to indicate their attitudes towards the risk of developing cervical cancer. The results are shown in Table 4.23.

Table 4.23: Respondents' attitude towards risk of developing cervical cancer (n=500)

Item	Frequency	%
Strongly Agree	21	4.2
Agree	228	45.6
Neutral	94	18.8
Disagree	147	29.4
Strongly Disagree	10	2.0
Total	500	100

The results show that 21 (4.2%) of the respondents strongly agreed that they were not at risk of developing cervical cancer, 228 (45.6%) agreed that they were not at risk of developing cervical cancer, 94 (18.8%) were uncertain about developing cervical cancer, 147 (29.4%) agreed that they were at risk of developing cervical cancer and 10 (2%) strongly agreed that they were likely to develop cervical cancer. A majority of the respondents believed that they were not at risk of developing cervical cancers. This could explain why the respondents were reluctant to take pap smear.

Cervical cancer has signs and symptoms, especially at the advanced stage of the disease. Therefore, there was need to check the attitudes of respondents on signs and symptoms of cervical cancer. This was done through Question 18. The results obtained for this question are shown in Table 4.24.

Table 4.24: Respondents' attitudes towards signs and symptoms of cervical cancer (n=500)

Item	Frequency	%
Strongly Agree	20	4.0
Agree	357	71.4
Neutral	39	7.8
Disagree	71	14.2
Strongly Disagree	13	2.6
Total	500	100

The results indicate that 357 (71.4%) of the respondents agreed that they had no signs and symptoms of cervical cancer. The respondents believed that for one to know that she had cervical cancer there should be signs and symptoms which are easily noticeable. This could be another reason why the respondents were reluctant to take a pap smear and also believed that they were not at risk of developing cancer.

Respondents' beliefs in taking pap smear were also investigated using Question 19. The results for this question are presented in Table 4.25.

Table 4.25: Respondents' attitudes towards the necessity of doing a pap smear (n=500)

Item	Frequency	%
Strongly Agree	22	4.4
Agree	44	8.8
Neutral	30	6.0
Disagree	253	50.6
Strongly Disagree	151	30.2
Total	500	100

Results show that 253 (50.6%) of respondents believed that it was not necessary to take a pap smear, 30 (6.0 %) respondents were not decided, and 44 (8.8%) respondents believed that it was necessary to take a pap smear. It could be deduced that the respondents had a positive attitude towards taking a pap smear, although they were not prepared to take one.

Respondents were asked to indicate whether a pap smear was painful in Question 20. Table 4.26 shows that 107 (21.4%) of the respondents felt that a pap smear was painful, 156 (31.2%) were uncertain about pap smear, 203 (40.6%) indicated that a pap smear was not painful. The respondents who were neutral could have been those

who initially indicated that they did not know about pap smear. However, the results show a positive attitude towards pap smear.



Table 4.26: Respondents' indication whether a pap smear was painful (n=500)

Item	Frequency	%
Strongly Agree	4	0.8
Agree	107	21.4
Neutral	156	31.2
Disagree	203	40.6
Strongly Disagree	30	6.0
Total	500	100

Among the respondents there were some who knew about pap smear and some who took the test. The researcher wanted to establish whether the respondents were embarrassed by taking a pap smear. Table 4.27 shows the results of Question 21.

Table 4.27: Respondents' indication whether a pap smear is embarrassing (n=500)

Item	Frequency	%
Strongly Agree	3	0.6
Agree	63	12.6
Neutral	92	18.4
Disagree	282	56.4
Strongly Disagree	60	12
Total	500	100

The majority of the respondents (282; 56.4%) disagreed that a pap smear was embarrassing while 13.2% (0.6% strongly agreed and 12.6% agreed) thought it was embarrassing. The remainder were not certain whether a pap smear was embarrassing

or not. The results show a positive attitude towards a female pap smear by the respondents in this sample.

Respondents were asked to indicate their preference on who takes the pap smear. They indicated their responses on a Likert scale continuum of five points. The results are displayed in Table 4.28.

Table 4.28: Respondents' preference of a female pap smear tester (n=500)

Item	Frequency	%
Strongly Agree	57	11.4
Agree	57	11.4
Neutral	32	6.4
Disagree	246	49.2
Strongly Disagree	108	21.6
Total	500	100

The results show that only 22.8% (strongly agreed and agreed) of the respondents preferred a female health care worker to a male health care worker, 6.4% did not have any preference. The majority of the respondents 70.8% preferred to be tested by males.

4.4 Practices

Practices among women regarding cervical cancer screening are important indicators for health care prevention and intervention. In this study, various responses to questions were collated to gain a better insight into the health care practices of respondents with regard to the pap smear – these are summarised in Tables 4.29 to 4.39.



The results in Table 4.29 indicate the number of pap smears taken by the respondents within a six month period (Question 23).

Table 4.29: Frequency of pap smear in six months (n=500)

Rate	Frequency	%
1	54	10.8
2	4	0.8
None	442	88.4
Total	500	100

The results show that 54 (10.8%) respondents took pap smear once in six months, 4 (0.8%) took pap smear twice in the past six months and the majority 442 (88.4%) did not take a pap smear in the past six months. The results indicate that respondents had a tendency not to take a pap smear within a duration of six months as recommended. This includes women who were aware of the importance of taking a pap smear. The respondents may be lacking motivation to take a pap smear.

Question 24 required respondents to indicate the last time they took a pap smear. The results in Table 4.30 are based on the data obtained from the respondents. The data was categorised for processing purposes and to ease evaluation.

Table 4.30: Last time a pap smear was taken by respondents (n=500)

Period	Frequency	%
2000-2005	7	1.4
2006-2010	26	5.2
2011-2013	92	18.4
2014	46	9.2
Not done	329	65.8
Total	500	100



The results show that some respondents did take a pap smear, but at varying time intervals. Some respondents (7.1%) took the test during the previous 8 years, 26 (5.2%) at least in the previous 4 years, others 92 (18.4%) at least in the previous year and 46 (9.2%) respondents in the current year. The majority of the respondents 329 (65.8%) have never taken a pap smear. The results show a lack of practice in pap smear among the study sample. Although the previous results indicated a positive attitude towards pap smear, the results in Table 4.30 indicate a serious lack of pap smear practice by the respondents.

Question 25 required respondents to indicate where the pap smear was done. Only those respondents who indicated that they took a pap smear in Question 24 were considered in this question. From Table 4.31, it can be observed that the majority of the respondents 113 (66.1%) took pap smear at the clinic, 9 (5.3%) at a gynaecologist, 11 (6.4%) at a general practitioner, 9 (5.3%) at a hospital and the remainder 29 (17.0%) could not remember where they took the pap smear. The main provider of pap smear seems to be the clinics.

Table 4.31: Distribution of places where Pap smear was done (n=171)

Place	Frequency	%
Clinic	113	66.1
Gynaecologist	9	5.3
General Practitioner	11	6.4
Hospital	9	5.3
Cannot remember	29	17.0
Total	171	100



Question 26 asked respondents whether they went back to collect their results after the testing. Table 4.32 shows the results of the processed data.

Table 4.32: Respondents' indication on collection of results (n=171)

Indication	Frequency	%
No	30	17.5
Yes	120	70.2
Cannot remember	21	12.3
Total	500	100

The results in Table 4.32 indicate that 30 (17.5%) of respondents did not collect their results, while 120 (70%) collected their results. The remainder 21 (12.3%) could not remember whether they collected their results. It could be deduced that a majority of the respondents know their cervical cancer results.

Question 27 was intended to check the frequency of taking a pap smear among the respondents. The respondents were supposed to select from a given list of options. The results in Table 4.33 show how this question was answered.

Table 4.33: Frequency of pap smear taken by respondents (n=500)

Response	Frequency	%
Don't know	363	72.6
Once in 2 years	8	1.6
Once in 3 years	6	1.2
Once in a year	120	24
Once in life	3	0.6
Total	500	100

The results show varied responses, most of which show, lack of knowledge on the frequency of taking a pap smear. Only 120 (24%) of respondents were correct in the frequency of once a year. A majority of the respondents 363 (72.6%) did not give any clue on the frequency of pap smear. Generally, these results show a lack of practical knowledge on the frequency of pap smear among the respondents. The results also clearly indicate that few individuals go for pap smear.

Respondents were asked to indicate difficulties they faced in taking a pap smear. Data was collected through Question 28 of which the results are summarised in Table 4.34. Although respondents cited various difficulties for not taking a pap smear, the majority 347 (69.4%) indicated that they lacked knowledge on pap smears, 103 (20.6%) respondents indicated that they lacked time. Procedure, privacy and staff attitude seem to be less of the constraints on the respondents' part. The importance of pap knowledge and time availability seem to be emphasised by respondents.

Table 4.34: Difficulties in taking a pap smear (n=500)

Difficulty	Frequency	%
Don't like procedure	47	9.4
Lack of knowledge	347	69.4
Lack of privacy	2	0.4
Lack of time	103	20.6
Staff attitudes	1	0.2
Total	500	100

To check why respondents were not taking pap smear as sought in Question 13, a cross-tabulation was made between Questions 13 and 28. Table 4.35 shows the outcome of the cross-tabulation.

Table 4.35: Cross-tabulation of taking a pap smear and difficulties experienced (n=500)

		Q28 What difficulty do you have with doing a pap smear?					
		Do not like procedure	Lack of knowledge	Lack of privacy	Lack of time	Staff attitude	Total
Q13 Have you ever had a pap smear done?	No	0	306	0	31	1	340
	Yes	15	73	0	72	0	160
	Total	15	373	0	103	1	500

important role in the taking of a pap smear.

The results in Table 4.35 corroborate those in Table 4.34, that is, lack of knowledge and time are significant difficulties that respondents have to overcome in order to take a pap smear.

The results in Table 4.36 show the cross-tabulation of level of education and the taking of a pap smear.

Table 4.36: Cross-tabulation of taking a pap smear and level of education (n=500)

		Q32 Level of education						
		College certificate	Degree	Never schooled	Technicon diploma	Up to grade 12	Up to grade 7	Total
Q13 Took pap smear	No	29	8	10	14	233	46	340
	Yes	34	8	2	19	65	32	160
	Total	63	16	12	33	298	78	500

The results show a mixed reaction to the taking of pap smear with respect to the level of education. There is no clear pattern on the influence of education on the respondents' taking a pap smear. Therefore, taking of a pap smear is independent of the respondents' level of education.

To find the link between the effect of age on taking a pap smear, Questions 13 and 29 were cross-tabulated (Table 4.37). The results show that none of the respondents below the age of 20 took a pap smear, only 62 of 258 in the age range 20 to 30 took a pap smear, 40 out of 91 in the age range 30 to 40 also took a pap smear, while 31 out of 61 in the age range 40 to 50 underwent a pap smear, and 27 out of 53 aged above 50 also took a pap smear at some time. The results indicate that age may play an important role in the taking of a pap smear.

Table 4.37: Effects of age on taking a pap smear (n=500)

		Q29 Age range (years)					Total
		Below 20	20 – 30	30 – 40	40 – 50	Above 50	
Q13 Took pap smear	No	37	196	51	30	26	340
	Yes	0	62	40	31	27	160
	Total	37	258	91	61	53	500

The effect of an individual's marital status was also cross-tabulated against taking a pap smear. The results of the cross-tabulation of Questions 13 and 30 are shown in Table 4.38.

Table 4.38: Effect of marital status on taking a pap smear (n=500)

		Q30 Age range (years)					Total
		Divorced	Living together	Married	Single	Widow	
Q13 Took pap smear	No	13	50	71	194	12	340
	Yes	8	16	89	37	10	160
	Total	21	66	160	231	22	500



The results show that more married women took a pap smear than any other groups of women in this survey. The second group was that of single women and the least consisted of divorcees. This means that married women are more likely to take a pap smear than divorcees, those living together, single or widows.

The attitude toward one having cervical cancer was cross-tabulated with the need to take a pap smear. This was done using Questions 18 and 19. The results are presented in Table 4.39.

The results show that those who disagreed on the notion that it is not necessary to take a pap smear also disagreed on having signs and symptoms of cervical cancer. The results seem to point out that the majority of the respondents had a positive attitude towards the necessity of taking a pap smear, even though they had no signs and symptoms of cervical cancer.

4.5 Correlations

In the correlation results, the size of the correlation coefficient, Pearson's r , shows the strength of the relationship between the variables. The sign before the coefficient (positive or negative) determines the direction of the relationship. $p < 0.10$ and $p < 0.01$. The Pearson product-moment correlation coefficient was used to determine correlation between various items being investigated. The statistical tests were determined using the SPSS statistical package (version 20). The tables that follow show the results of the correlations between variables investigated.

Table 4.40: Correlation between awareness of cervical cancer (Question 1) and prevention of cervical cancer (Question 2), knowledge of signs and symptoms

Table 4.39: Cross-tabulation of no signs and symptoms and necessity to take a pap smear (n=500)

		Q19 Not necessary to take a pap smear					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Q18 No signs and symptoms of cervical cancer	Strongly disagree	5	1	1	4	2	13
	Disagree	32	27	4	6	2	71
	Neutral	3	10	21	1	4	39
	Agree	95	215	4	31	12	357
	Strongly agree	16	0	0	2	2	20
	Total	151	253	30	44	22	500

The results show that those who disagreed on the notion that it is not necessary to take a pap smear also disagreed on having signs and symptoms of cervical cancer. The results seem to point out that the majority of the respondents had a positive attitude towards the necessity of taking a pap smear, even though they had no signs and symptoms of cervical cancer.

4.5 Correlations

In the correlation results, the size of the correlation coefficient, Pearson's rho (r) shows the strength of the relationship between the variables. The sign before the coefficient (positive or negative) determines the direction of the correlation at $p < 0.05$ and $p < 0.01$. The Pearson product moment correlation coefficient was used to determine correlation between various items being investigated. The correlations were determined using the SPSS statistical package (version 22). The tables that follow show the results of the correlation between variables (questions).

Table 4.40: Correlation between awareness of cervical cancer (Question 1) and prevention of cervical cancer (Question 2), knowledge of people living with cervical

cancer (Question 3), knowledge of pap smear (Question 4), taking a pap smear (Question 13), diagnosis of cervical cancer (Question 14), age of respondents (Question 29) and level of education (Question 30).

Table 4.40: Correlation of cervical cancer awareness and knowledge of pap smear

Question	Q1 Have you ever heard about cervical cancer?
	Pearson's rho (r)
Q2: Do you know that cervical cancer is preventable?	0.453**
Q3: Do you know that anybody who has cervical cancer?	0.236**
Q4: Have you ever heard about pap smear?	0.779**
Q13: Have ever had a pap smear done?	0.358**
Q14: Cervical cancer can be diagnosed by pap smear	0.382**
Q29: How old are you?	0.292**
Q30: Marital status	0.212**

**Correlation is significant at the 0.01 level (2-tailed).
 *Correlation is significant at the 0.05 level (2-tailed).

The results Table 4.40 show positive correlations between the respondents' awareness of cervical cancer and their awareness of the preventability of cervical cancer (Questions 1 and 2; $r = 0.453$ at $p < 0.01$). This means that as the awareness of cervical cancer increases, the knowledge of its preventability also increases. The relationship is relatively strong

The results also show that as the awareness of cervical cancer increases the greater the chance of knowing those individual women who have cervical cancer. This is shown by an r of 0.238 at $p < 0.01$ (Questions 1 and 3). There is a weak relationship between the two variables. This implies that women who have knowledge of cervical cancer have a low chance of knowing victims of cervical cancer.



There is a strong positive relationship between being aware of cervical cancer and being aware of pap smear (Questions 1 and 4; $r = 0.779$ and $p < 0.01$). The results indicate that women who are aware of cervical cancer are likely to have knowledge of a pap smear.

There is a fairly strong link between having knowledge of cervical cancer and taking a pap smear (Questions 1 and 13; $r=0.358$ and $p<0.01$). As the knowledge of cervical cancer increases the chances of taking a pap smear also increase.

Correlation of Questions 1 and 14 also yielded a strong link between the two variables. The r of 0.382 and $p<0.01$ show that as the awareness of cervical cancer increases, the awareness of pap smear as a diagnostic test increases.

The awareness of cervical cancer is weakly linked to the age of the respondents ($r=0.292$ at $p<0.01$). This also applies to marital status ($r=0.212$ and $p<0.01$). Marital status and age are weak influential factors for women's awareness of cervical cancer. There are slight chances that older women and married women are likely to be aware of cervical cancer compared to the other groups of women involved in the research sample.

A cross-tabulation of the preventability of cancer and other selected variables yielded low positive correlations of r between 0.380 and 0.097 . The results are shown in Table 4.41.

Table 4.41: Correlation of knowledge of pap smear and preventability of cervical cancer

Question	Q2 Do you know that cervical cancer is preventable?
	Pearson's rho (r)
Q4: Have you ever heard about pap smear?	0.380**
Q13: Have ever had a pap smear done?	0.291**
Q14: Cervical cancer can be diagnosed by pap smear	0.326**
Q29: How old are you?	0.191**
Q30: Marital status	0.216**
Q32: Educational level	0.097*
**Correlation is significant at the 0.01 level (2-tailed).	
*Correlation is significant at the 0.05 level (2-tailed).	

The results show that knowledge of preventability of cervical cancer increases with the awareness of the pap smear (Questions 2 and 4; $r=0.380$ at $p<0.01$). This means that women who knew that cervical cancer could be prevented were likely to have heard about the pap smear. Also, there was weak correlation between doing a pap smear and the knowledge of its preventability (Questions 13 and 14; $r=0.291$, $p<0.01$). This means knowledge of the preventability of cervical cancer was not the only influential factor for women to take a pap smear. There was a relatively strong link between knowledge of preventability of cervical cancer and knowledge of the pap smear as a diagnosis for cervical cancer (Questions 2 and 14; $r=0.326$ $p<0.01$).

The relationship between age and knowledge of prevention of cervical cancer was weak (Questions 2 and 29; $r=0.191$ at $p<0.01$). Older women tended to have more knowledge on the fact that cervical cancer could be prevented than younger women. Marital status seems to have slightly recognisable influence on the knowledge of prevention of cervical cancer (Questions 2 and 30; $r=0.216$ and $p<0.01$).

Married women tended to be aware of the fact of that cervical cancer could be prevented. The level of education correlates weakly with the knowledge of prevention of cervical cancer (Questions 32 and 2; $r=0.097$ at $p<0.05$). The level of education has very little effect on the knowledge of the prevention of cervical cancer within this sample. ($r=0.186$ at $p<0.01$). Their women's knowledge of pap smear could be

explained in terms of their age. Correlations of Question 4 and Questions 13, 14, 29 and 30 were done. The results are shown in Table 4.42.

Table 4.42: Correlation of age, marital status and education with preventability of cervical cancer

Question	Question 4 Have you ever heard about pap smear?
	Pearson's rho (r)
Q13: Have you ever had a pap smear done?	0.329**
Q14: Cervical cancer can be diagnosed by pap smear?	0.405**
Q29: How old are you?	0.268**
Q30: Marital status	0.186**
**Correlation is significant at the 0.01 level (2-tailed).	
*Correlation is significant at the 0.05 level (2-tailed).	

The results show a positive correlation for Question 4 with the other three questions at $p<0.01$. Taking of a pap smear was correlated with having heard about the pap smear. Women who had heard about the pap smear had a higher chance of taking a pap smear (Questions 4 and 13; $r=0.329$ at $p<0.01$). Knowledge about the pap smear and confirmation of the use of it to diagnose cervical cancer correlated strongly (Questions 4 and 14; $r=0.405$ at $p<0.01$). This means that the more women knew about the pap smear the more they became aware that cervical cancer could be diagnosed using the pap smear. The knowledge about the pap smear also correlated with age, but weakly (Questions 4 and 29; $r=0.268$ and $p<0.01$). The respondents' age

had less influence on their knowledge of the pap smear. As women grew older they tended to be less knowledgeable on the pap smear. Marital status was thought to influence knowledge of the pap smear among women. The results above show a very weak correlation between marital status and knowledge of the pap smear (Questions 30 and 4; $r=0.186$ at $p<0.01$). Thus, women's knowledge of pap smear cannot be explained in terms of their age.

Cervical cancer is diagnosed using the pap smear. Age and marital status were expected to have a link with taking a pap smear. Correlations for these variables were done and the results are recorded in Table 4.43.

Table 4.43: Correlations of taking a pap smear and pap smear diagnosis, age and marital status

Question	Question 13 Have ever had a pap smear done?
	Pearson's rho (r)
Q14: Cervical cancer can be diagnosed by pap smear?	0.487**
Q29: How old are you?	0.291**
Q30: Marital status	0.319**
**Correlation is significant at the 0.01 level (2-tailed).	
*Correlation is significant at the 0.05 level (2-tailed).	

The results show a strong to weak relationship between taking a pap smear with age, marital status and knowledge of the diagnosis. Taking a pap smear is strongly linked to the knowledge of cervical cancer being diagnosed using a pap smear (Questions 13 and 14; $r=0.487$ and $p<0.01$). The more women know that a pap smear could be used to diagnose cervical cancer the more they are likely to take a pap smear. Age seems to have little effect on the taking a pap smear by women. Age correlates weakly with taking of a pap smear (Questions 13 and 29; $r=0.291$ at $p<0.319$). However, marital status seems to have a significant influence on taking a pap smear. An $r=0.319$ at

$p < 0.01$ means that more married women might have the disposition of taking a pap smear, regardless of their age.

Knowing that a pap smear can be used to diagnose cancer has a weak link with age and marital status of women as shown by the correlation coefficients (Table 4.44).

Table 4.44: Correlation of pap smear diagnosis, age and marital status.

Question	Q14 Cervical cancer can be diagnosed by pap smear?
	Pearson's rho (r)
Q29: How old are you?	0.130**
Q30: Marital status	0.215**
**Correlation is significant at the 0.01 level (2-tailed).	
*Correlation is significant at the 0.05 level (2-tailed).	

The results again confirm that age has a little effect on knowing the diagnosis of cervical cancer (Questions 14 and 29; $r=0.130$ at $p < 0.01$). There are slim chances that knowing that cervical cancer can be diagnosed using a pap smear depends on age. Marital status also has a positive weak link to knowing that cervical cancer can be diagnosed using a pap smear.



CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

The purpose of this chapter is to discuss the research findings and provide a conclusion based on the findings. This research study was intended to determine the knowledge, attitudes and practices regarding cervical cancer screening among women attending the THOPD and TGC. The data for the research was collected using a hand-posted questionnaire consisting of 42 items categorised in four sections. The items sourced data using a number of variables that could be used to determine the topical issues being researched. Quantitative data was collected, coded and processed using SPSS Version 22. Results were then presented in Chapter 4 in frequency tables, cross-tabulations and correlation tables. A number of findings were made regarding the screening of cervical cancer among women who attended the two study sites.

In this section findings are discussed under three research questions:

1. What was the level of knowledge regarding cervical cancer screening among women attending cervical cancer screening at THOPD and TGC?
2. What were the attitudes of women attending THOPD and TGC regarding cervical cancer screening?
3. What were the practices regarding cervical cancer screening among women attending THOPD and TGC?



Results from the demographic and correlation analyses were used to support inferences and conclusions arrived at for each research question.

5.2 Discussion of the Findings of the Study

5.2.1 Level of Knowledge Regarding Cervical Cancer Screening Among Women Attending Cervical Cancer Screening

Both THOPD and TGC are public health institutions which offer health facilities to the local communities at low cost. Usually women who visit these institutions are offered free health education on a variety of diseases, including cervical cancer. In this research study most of the women between the ages of 20 and 40 were found to be accessing the OPD more than any other age group. This finding is consistent with previous results indicating that the majority of those who visit clinics for cervical screening were of the age between 20 and 35, while older women avoided the screening (Campbell, 2014).

Most of these women were educated and were expected to understand the need for good basic health. With such an educated population, it was established that a majority of the women were aware of cervical cancer but lacked proper knowledge about the disease. The fact that most of the women were aware of cervical cancer were ignorant about the fact that cervical was preventable was evidence enough to show that being aware of a disease did not guarantee that they had enough information on the same disease. Only a small number of women knew that cervical cancer was preventable.

The majority of the women were aware of the pap smear, including some of those who were ignorant of cervical cancer screening. It was also found that some of the women who claimed to be aware of cervical cancer were ignorant of the pap smear.



Women lacked sufficient information about cervical cancer because they relied only on two sources of information about cervical cancer, which are nurses and the media. This means that most of the women involved in this study were not visiting general practitioners and other health professionals who could have been the source of vital information on cervical cancer. One of the reasons for relying on the hospital stems from the fact that the majority of the members of the population were unemployed.

The majority of the women who were confident that they were not at risk of cervical cancer did not have enough knowledge about the disease. Overall, this shows a precarious situation in which women regarded cervical cancer. The women who claimed that they are not at risk while they lacked vital information about cervical cancer put themselves at greater risk of the disease. According to Campbell (2014) there is a decline in women who take part in cervical cancer screening due to their ignorance of the impact of the disease on their lives.

The study noted that a small number of women were aware of the use of the pap smear in detecting cancer. However, some women who were aware of the pap smear did not know its use. The majority of the women in this study did not take a pap smear. Only a small number took a pap smear. It could be deduced that a very small number of women who had heard about the pap smear took one and they were more likely to be aware of their cervical cancer status. This means that some of those women who were aware of cervical cancer, pap smear and the risks posed by cervical cancer did not take the pap smear for various reasons. The main reasons for not undergoing a pap smear could be the absence of symptoms and the default of medical injunction for cases, the lack of information and ignorance of screening usefulness for



controls (Sichanh, Quet, Chanthavilay, Diendere, Latthaphasavang, Longuet & Buisson, 2014.).

It was, therefore, noted that the majority of the women were either ignorant or misinformed on how cervical cancer could be diagnosed. Knowledge on the diagnoses of cervical cancer was clearly lacking among the respondents, including some of those who claimed to know something about cervical cancer and the pap smear.

5.2.2 Attitudes of Women Attending THOPD and TGC Regarding Cervical Cancer Screening

The majority of the women did not take a pap smear, although they seem to indicate a positive attitude towards getting tested for cervical cancer. The women believed that there were not at risk of developing cervical cancer. This could be the reason why they were reluctant to take a pap smear. The respondents believed that for one to know that she has cervical cancer there should be signs and symptoms which one can easily notice. This could be another reason why the respondents were reluctant to take a pap smear and also believed that they were not at risk of developing cancer. Campbell (2014) supports this notion by apportioning the blame on the widespread ignorance among women about cervical cancer.

It could be deduced that the respondents had positive attitudes towards taking a pap smear although they were not prepared to take one. In Campbell's (2014) study, women were worried that the five-minute test would be painful and embarrassing. On the contrary the majority of the women in this study were of the view that that a pap smear was not embarrassing. Most of the women were not worried about who tested them (whether male or female health care worker). Implicitly, this could be taken as a positive attitude towards the pap smear by the respondents in this sample. However,



the results confirm the ignorance that prevailed among the population towards believing in something that they had little or no information about.

5.2.3 Practices Regarding Cervical Cancer Screening Among Women

The majority of the women involved in this study did not take a pap smear in the previous six months. Those who took a pap smear, had done so a year or 2 ago. The results indicate that respondents tended not to take a pap smear in within a duration of six months as recommended. This included women who were aware of the importance of taking a pap smear. Women were ignorant of the time interval for taking a pap smear, making cervical cancer screening a rare practice among women who visited both institutions. The respondents may have been lacking motivation to take pap smear. The results show lack of practice in taking a pap smear among the sample. Although the previous results indicated a positive attitude towards a pap smear, the results in Table 4.29 indicate a serious lack of practice by the respondents.

Clinics were identified as the main providers of cervical cancer screening. A majority of the women who took a pap smear collected their results, although a small number of these women could not remember whether they collected their results or not. This underlines that women were not aware of the risk posed by cervical cancer. Generally, these results show lack of practical knowledge on the frequency of taking a pap smear among the women involved in this study. It is clear that that a small number of women underwent cervical cancer screening. Women identified in the study that they lacked knowledge and time to take a pap smear. Lack of knowledge and time were regarded as influential factors that women have to overcome in order to take a pap smear.



The marital status of the population involved was skewed towards unmarried women and the majority of these were students, the unskilled and the unemployed. These women visited the hospital either once a month or once every two months. There were high chances that some of the population members had attended the sessions at least once a month and had information on cervical cancer screening. The majority of the women who did not visit the hospital frequently did not have medical aid facility.

Cross-tabulation reveals that more married women took a pap smear than any other group of women in this study. It could be inferred that married women were possibly encouraged by their spouses, a factor which this study did not investigate. The results show that those who disagreed on the notion that it was not necessary to take a pap smear also disagreed on having signs and symptoms of cervical cancer. The results seem to point out that the majority of the respondents had a positive attitude towards the necessity of taking a pap smear, although they had no signs and symptoms of cervical cancer.

Correlation analysis was done and some of the results were found to be significant at $p < 0.05$ and $p < 0.01$. The study established that women's awareness of the preventability of cervical cancer increased with the awareness of cervical cancer in general. There was a high probability that women who were aware of cervical cancer were also aware of the pap smear ($r = 0.779$ and $p < 0.01$). It can be argued that women who were aware of cervical cancer were likely to be aware of the pap smear. This implies that as the awareness of cervical cancer increases the more an individual is likely to take a pap smear. This also confirmed a fairly strong link between having knowledge of cervical cancer and taking a pap smear ($r = 0.358$ and $p < 0.01$). As the



knowledge of cervical cancer increases, the chances of taking a pap smear also increases.

The results show that knowledge of preventability of cervical cancer increases with the awareness of the pap smear ($r=0.80$ at $p<0.01$). This means that women who knew that cervical cancer could be prevented were likely to have heard about the pap smear. There was weak correlation between doing a pap smear and the knowledge of its preventability ($r=0.291$, $p<0.01$). This means knowledge of the preventability of cervical cancer was not the only influential factor for women to take a pap smear. There was a relatively strong link between knowledge of preventability of cervical cancer and knowledge of the pap smear as a diagnosis for cervical cancer ($r=0.326$, $p<0.01$). The relationship between age and knowledge of prevention of cervical cancer was weak ($r=0.191$ at $p<0.01$). Older women tended to have more knowledge that cancer could be prevented than younger women, but rarely took a pap smear. It was also found that women who had heard about the pap smear had a higher chance of taking a pap smear ($r=0.329$ at $p<0.01$).

5.3 Conclusion

In the study, women who attended the two health institutions were mainly aged between 20 and 40 years, mostly educated, skilled and unemployed. However, they lacked information about cervical cancer and its screening and, as a result, they relied more on beliefs than factual information. This put women at risk of cervical cancer as they relied on signs and symptoms of cervical cancer, symptoms which they did not even know.



Furthermore, the main sources of information about cervical cancer were nurses and media. The frequency of visits by women to the two institutions (THOPD and TGC) was too low making it difficult for women to access the nurses outside these visits. The other issue to contend with was the type of information about cervical cancer that the women read from the media. They were also prepared to get more information from nurses about cervical cancer screening, but most of them stayed far away from the hospital.

The study also found that the major factors that influenced cervical cancer screening were ignorance, belief of not being at risk, having many contending issues, 'blind positive attitude' to own health and fear of having unexpected positive results as well as superstitious beliefs about the disease. As a result, widows, divorcees and other single women have misconceptions wherein they associate cervical cancer with sexually transmitted diseases. The majority of women who knew about cervical cancer and pap smear did not know the use of the pap smear. The study also found that cervical cancer screening among women who visited the two institutions was influenced by other factors that correlated significantly at $p < 0.05$ and $p < 0.01$.

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5.4 Contribution of the Study

This study has identified problems associated with cervical cancer screening that caused most of the women to dodge the practice. It has also been shown that the information provided at the clinics and the mechanisms of disseminating such information have deficiencies that put constraints on the already ignorant women population. The perception of women is that if there are no signs and symptoms of cervical, it means that there is no cervical cancer.

5.5 Recommendations

The study makes the following recommendations:

- ✿ Department of Health must organize awareness campaigns for cervical cancer screening.
- ✿ The government must improve in-service training for health care workers on how to educate the women population about cervical cancer.
- ✿ Community health centers and clinics must include cervical screening programmes on the daily service standard.
- ✿ Department of Health must encourage Compulsory pap smear taking for all women who attend the clinics.
- ✿ The government must improve oncology training for nurses.

5.6 Further Studies

This study could be used as the basis for future studies to improve the cervical cancer screening programme in South Africa.



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APPENDIX 1: Instrument

Questionnaire

1. Please do not write your name or identity number on any part of this questionnaire.
2. Do not tear any page.
3. Answer all questions to the best of your ability.
4. Please do not hold any conversation with any one concerning this questionnaire and its content.
5. Please tick or fill the gap in the spaces provided.

SECTION A

CERVICAL CANCER SCREENING RELATED KNOWLEDGE

- Tick an approximate answer
- Tick an approximate answer

1. Have you ever heard about cervical cancer?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

2. Do you know that cervical cancer is preventable?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

3. Do you know anybody who has cervical cancer?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

4. Have you ever heard about pap smear?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

5. Where did you hear about pap smear?

 Nurse

 Doctor

 General
Practitioner

 Health Promoter

 Family

 Media

 Friends

6. Did the doctor at this hospital inform you about pap smear?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

7. Did the nurse at this hospital inform you about pap smear to you?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

8. Did the doctor at this hospital suggest a pap smear to you?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

9. Did the nurse at this hospital suggest a pap smear to you?

 Yes
 Yes
 Yes
 Yes

 No
 No
 No
 No

10. Do you think you are at high risk of cervical cancer?

 Yes

 No

 Don't know

11. What do you think a pap smear is done for?

 To detect infection

 To prevent infection

 To detect cancer

 To prevent cancer

 None of the above

 I don't know

12. Do you know how pap smear is done?

 Yes
 Yes

 No
 No

13. Have you ever had a pap smear done?

 Yes
 Yes

 No
 No

14. Cervical cancer can be diagnosed by pap smear.

 Yes

 No

 Don't know

**SECTION B****ATTITUDE AMONG WOMEN REGARDING CERVICAL CANCER SCREENING**

Likert scale ranging from:

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Please tick appropriate space

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15. I worry about getting cervical cancer					
16. I am afraid of pap smear					
17. I believe I am not at risk for developing cervical cancer					
18. I do not have any signs and symptoms					
19. I believe it is not necessary to do pap smear					
20. Pap smear is painful					
21. Pap smear is embarrassing					
22. I prefer a female health care worker to do pap smear					

SECTION C**PRACTICES AMONG WOMEN REGARDING CERVICAL CANCER SCREENING**

Please tick the appropriate answer

23. How many pap smears have you had in the past 6 months?	None	1	2	3	4	5	More than 5
24. When was your last pap smear done?							
25. Where was your last pap smear done?	Clinic	Hospital		General practitioner		Gynaecologist	

26. Did you go back for your pap smear results? Yes No

27. How often are you allowed to come for pap smear?

- Don't know Once a year Once in 2 years Once in 3 years
 Once in 10 years Once in lifetime

28. What difficulty do you have with doing a pap smear?

- Lack of knowledge Lack of time Staff attitude Lack of privacy
 Don't like the procedure



SECTION D

DEMOGRAPHIC DATA

Tick appropriate answer or fill the gap in the spaces provides

29. How old are you? State years

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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30. Marital status

<input type="checkbox"/>	Single	<input type="checkbox"/>	Married	<input type="checkbox"/>	Divorce	<input type="checkbox"/>	Widow	<input type="checkbox"/>	Living together
--------------------------	--------	--------------------------	---------	--------------------------	---------	--------------------------	-------	--------------------------	-----------------

31. Number of children's

<input type="checkbox"/>	None	<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5 or more
--------------------------	------	--------------------------	---	--------------------------	---	--------------------------	---	--------------------------	---	--------------------------	-----------

32. Education level

<input type="checkbox"/>	Never	<input type="checkbox"/>	Up to	<input type="checkbox"/>	Up to	<input type="checkbox"/>	College	<input type="checkbox"/>	Tecknicon	<input type="checkbox"/>	University
	School		grade 7		grade 12		Certificate		Diploma		Degree

33. Occupation

<input type="checkbox"/>	Student	<input type="checkbox"/>	Unemployed	<input type="checkbox"/>	House	<input type="checkbox"/>	Unskill	<input type="checkbox"/>	ed	<input type="checkbox"/>	Skilled	<input type="checkbox"/>	Self
			wife		employed								

34. How do you get to the clinic?

<input type="checkbox"/>	On foot	<input type="checkbox"/>	Own car	<input type="checkbox"/>	Taxi	<input type="checkbox"/>	Cycle	<input type="checkbox"/>	Bus	<input type="checkbox"/>	Other
--------------------------	---------	--------------------------	---------	--------------------------	------	--------------------------	-------	--------------------------	-----	--------------------------	-------

35. How long does it take to the clinic?

<input type="checkbox"/>	30 Minutes	<input type="checkbox"/>	30 – 60 Minutes	<input type="checkbox"/>	1 – 2 Hours	<input type="checkbox"/>	2 – 3 Hours	<input type="checkbox"/>	7 Hours
--------------------------	------------	--------------------------	-----------------	--------------------------	-------------	--------------------------	-------------	--------------------------	---------

36. How often do you come to the clinic?

<input type="checkbox"/>	Once a Week	<input type="checkbox"/>	Once in 2 Weeks	<input type="checkbox"/>	Once a Month	<input type="checkbox"/>	Once in 2 Months	<input type="checkbox"/>	Once in 6 Months	<input type="checkbox"/>	Once a Year
--------------------------	-------------	--------------------------	-----------------	--------------------------	--------------	--------------------------	------------------	--------------------------	------------------	--------------------------	-------------

37. Do you have medical aid?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
--------------------------	-----	--------------------------	----

38. Do you have chronic disease?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
--------------------------	-----	--------------------------	----

39. Do you often bring a child to the clinic ?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
--------------------------	-----	--------------------------	----

40. Do you have a family history of cancer?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
--------------------------	-----	--------------------------	----

41. If yes, what type?

<input type="checkbox"/>	Breast	<input type="checkbox"/>	Cervical
--------------------------	--------	--------------------------	----------

42. Relationship

<input type="checkbox"/>	Father	<input type="checkbox"/>	Mother
<input type="checkbox"/>	Brother	<input type="checkbox"/>	Sister

Thank you for participating in the study!

APPENDIKISI 2: Tshibveledzwa



(Instrument)

MBUDZISAVHATHU

1. Vha songo nwala dzina kana nomboro ya vhune.
2. Vha songo tomola masiatari.
3. Vha fhindule mbudziso uya nga ndivho yavho.
4. Vha songo vha na vhudavhidzani na vhanwe malugana na mbudzisavhathu iyi.
5. Kha vha swaye kana u dadza kha zwikhala zwe vha newa.

KHETHEKANYO YA B

TSEDZULUSO YA KHENTSA YA MBUMBELO ZWI TSHI KWAMA NDIVHO YAVHO.

Kha vha nange phindulo yo teaho.

- | | | | |
|---|---|---|---|
| 1. Vhono pfa nga ha vhulwadze ha khentsa ya mbumbelo? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 2. Vhaya divha uri khentsa ya mbumbelo iya thivhelea? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 3. Vha divha munwe muthu arena khentsa ya mbumbelo? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 4. Vho no pfa nga ha pap smear? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 5. Vho zwipfa nga nnyi? | | | |
| <input type="checkbox"/> Muongi? | <input type="checkbox"/> Dokotela? | <input type="checkbox"/> Mushumeli wa Mutakalo? | |
| <input type="checkbox"/> Murado wa muta? | <input type="checkbox"/> Vhudavhidzani? | <input type="checkbox"/> Khonani? | |
| 6. Vho talutshedzwa nga dokotela nga ha pap smear? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 7. Vho talutshedzwa nga muongi nga ha pap smear? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 8. Dokotela o vha eletshedza nga ha u ita pap smear? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 9. Muongi o vha eletshedza nga ha u ita pap smear? | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | |
| 10. Vha hambula uri vha kha khombo ya unga di wana vhe na khentsa ya mbumbelo | <input type="checkbox"/> Ee | <input type="checkbox"/> Hai | <input type="checkbox"/> Athidivhi |
| 11. Vha hambula uri pap smear i itelwa mini? | | | |
| <input type="checkbox"/> U tumbula u kavhiwa | <input type="checkbox"/> U thivhela u kavhiwa | <input type="checkbox"/> U tumbula khentsa | <input type="checkbox"/> U thivhela khentsa |
| <input type="checkbox"/> Ahuna kha izwo zwo bulwaho | <input type="checkbox"/> Athidivhi | | |

12. Vha a divha uri pap smear i itiswa hani? Ee Hai
13. Vhono itwa pap smear? Ee Hai
14. khentsa ya mbumbelo inga tumbulwa nga pap smear naa? Ee Hai Athidivhi

KHETHEKANYO YA C

VHUVHA HA VHAFUMAKADZI ZWITSHI KWAMA TSEDZULUSO YA KHENTSA YA MBUMBELO

Tshivhumbeo ho shumiswa tshikalo tsha Linkert:

- Athi tendi na luthihi
- Athi tendi
- Ndi a tenda
- Ndi a tenda tshothe

Khavha swaye kha tshi khala tsho teaho.

Mbudziso	Athi tendi na luthihi	Athi tendi	Ndi a tenda	Ndi a tenda tshothe
15. Ndi a vhilahela uri ndi nga kavhiwa nga khentsa ya mbumbelo				
16. Ndi na nyofho ya u itwa pap smear				
17. Ndi tenda uri athiho kha khombo ya u diwana ndi na khentsa ya mbumbelo				
18. I thina tsumba dwadze				
19. Ndi a tenda uri asi zwa ndeme u itwa pap smear				
20. pap smear ia vhavha				
21. Pap smear ia shonisa				
22. Ndi takalela muongi wa mufumakadzi				

KHETHEKANYO YA D

MAITELE A VHAFUMAKADZI ZWI TSHI KWAMA TSEDZULUSO YA KHENTSA YA MBUMBELO

Khavha swaye ho teaho

23. Ndi lungana vha tshi ita pap smear kha minwedzi ya 6 yo fhiraho?	No	1	2	3	4	5	U fhiralutano
24. Vho fhedzisela lini u ita pap smear?							
25. Yo itwa ngafhi	Kiliniki	Vhuongeloni	Ha-dokotela wa dzhenerala		Ha-dokotela wa vhafumakadzi		

26. Vho ya vha tevhela mvelele dza ndingo dzavho? Ee Hai

27. Vha tea u ita lungana pap smear?

Athidivhi Luthihi kha nwaha Luthihi kha kha minwaha Luthihi kha minwaha miraru

Luthihi kha minwaha ya fumi Luthi vhutshiloni

28. Vha na vhulema ha mini kha u ita pap smear?

- U shaya ndivho U shaya tshifhinga Vhuvha ha vhaongi Usa vha na tshiphiri
- Athi takaleli maitete azwo

KHETHEKANYO YA A

ZWIDODOMBEDZWA ZWA VHUNE

Khavha swaye kana vha dadze ho teafo

29. Vhana minwaha mingana?

--	--	--

30. Zwidodombedzwa zwa mbingano Thingomalwa Ndo malwa Ndo tala Tshilikadzi Ri dzula rothe
31. Tshivhalo tsha vhana Tthina 1 2 3 4 Vha a fhira 5
32. Pfunzo Athingo funzwa U swika Grade 7 U swika grade 12 College Certificate Tecknicon Diploma University Degree
33. Mushumo Mugudi Athi shumi U londa muta Mushumo Zwawo Mushumo wo gudelwaho Udi shuma
34. Vha shumisa mini uda Kiliniki? Milenzhe Modoro wanga Taxi Basigira Bus zwine
35. Zwi dzhia tshifhinga tshingafhani uda kiliniki mithethe Ya 30 mithethe Ya 30 - 60 Iri nthihi Iri mbili Uya kha tharu Iri dza 7
36. Vha da kiliniki lungana luthihi kha vhege Luvhili kha vhege luthihi Kha nwedzi luthihi Kha minwedzi mivhili Luthihi Kha nwedzi ya rathi luthihi Kha nwaha
37. Vhana tshikimu tsha dzilafho? Ee Hai
38. Vhana vhwadze vhusa fholi? Ee Hai
39. Vha a disa nwana kiliniki tshifhinga tshothe naa? Ee Hai
40. Huna divhazwakale ya khentsa kha muta wa havho? Ee Hai
41. ara li vho tenda, ndi khentsa ya mini Damu Mbumbelo Zwinwe
42. Vhushaka Khotsi Mme khaladzi mukomana

Ria vha livhuwa u vha tshipida tsha mbudzisavhathu.

APPENDIX 3: Information Leaflet

Appendix 3 Information Leaflet

TITLE OF THE STUDY: KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING CERVICAL CANCER SCREENING AMONG WOMEN ATTENDING TSHILIDZINI HOSPITAL

Dear participant

Introduction

We invite you to participate in this research study. This information leaflet will help you to decide if you want to participate. Before you agree to take part you should fully understand what is involved. If you have any questions that this leaflet does not fully explain, please do not hesitate to ask the researcher (Ms Mudau)

The nature and purpose of the study

To assess knowledge, attitudes and practices regarding cervical cancer screening among women attending Tshilidzini Hospital.

Explanation of procedure to be followed

The study involves filling in a questionnaire that is provided, the researcher will summarize the findings of all those who took part in the survey.

Risks and discomfort involved

There is no risk in participating in the study.

Possible benefit of the study

Although you will not benefit directly from the study the results of the study will enable us to improve the screening practice in order to detect cervical cancer earlier and treatment.

APPENDIX 4: Informed Consent

Appendix 4 Consent to Participate in the Study

I confirm that the person asking my consent to take part in this study has told me about the nature, process, risks, discomforts and benefits of the study. I have also received, read and understood the information leaflet regarding the study. I am aware that the results of the study, including personal details, will be anonymously processed into research reports. I am participating highly. I have had time to ask questions and have no objection to participate in the study. I understand that there is no penalty should I wish to discontinue with the study and my withdrawal will not affect my consultation at this hospital in any way. I have received and signed a copy of this informed consent agreement.

Participant's Name	(please print)
Participant's Signature.....	Date

Researcher's Name

(please print)

Researcher's Signature.....

Date

Witness's Name.....

(please print)

Witness's Signature.....

Date

Date Considered: 19th 2014

Decision by Ethical Clearance Committee General

Signature of Chairperson of the Committee: _____

Name of the Chairperson of the Committee: Prof. G. S. Mokoena

APPENDIX 5: Ethical Clearance

Provincial Department of Health

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Ms AG Mudau

Student No: 11551371

PROJECT TITLE: Knowledge, attitudes and practices
regarding Cervical cancer screening among
women attending Tshilidzini Hospital, Limpopo
Province

PROJECT NO: SHS/14/PH/06/1605

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof A Olukoga	University of Venda	Supervisor
Dr AK Tugli	University of Venda	Co-supervisor
Ms AG Mudau	University of Venda	Investigator - Student

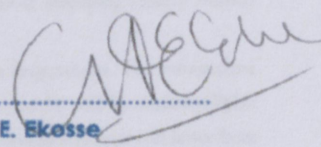
ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: May 2014

Decision by Ethical Clearance Committee Granted

Signature of Chairperson of the Committee:

Name of the Chairperson of the Committee: Prof. G.E. Ekosse



University of Venda

PRIVATE BAG X5050, TSHOHYANDOU, 09502, LIMPOPO PROVINCE, SOUTH AFRICA
TELEPHONE (015) 962 8504/8484 /8313 FAX (015) 962 8439

"A quality driven financially sustainable, rural-based Comprehensive University"

APPENDIX 6: Letter of Request to the Provincial Department of Health

P.O. Box 3119
THOHOYANDOU
0950
04 July 2014

Enq: Mudau AG
Cell: 0790155406
e-mail: mudauazwinndini@gmail.com

The Head of the Department
Department of Health and Social Development
Private Bag X9302
Polokwane
0700

Dear Sir / Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT TSHILIDZINI HOSPITAL

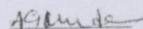
This serves to seek permission to conduct a research on the knowledge, attitudes and practices regarding cervical cancer screening among women in the above-mentioned Hospital.

I am a Master student at the University of Venda. My research project aims at determining the knowledge, attitudes and practices regarding cervical cancer screening among women attending services at Tshilidzini Hospital.

A questionnaire will be used to collect information from the respondents. The information obtained will be treated confidentially and the summary of the results will be made available to the Province. Attached is the ethical clearance from the University and approval letter from department of health.

Your help in facilitating the research will be highly appreciated.

Yours faithfully



Mudau AG



APPENDIX 7: Approval from Provincial Department of Health



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Latif Shamila

Ref:4/2/2

Mudau AG
University of Venda
Thohoyandou
0950x

Greetings,

Knowledge, attitudes and practices regarding Cervical Cancer screening amongst woman attending Tshilidzini Hospital, Limpopo Province.

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that-
 - 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.

Your cooperation will be highly appreciated.

Head of Department

21/07/2014
Date

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

The heartland of Southern Africa – development is about people

APPENDIX 8: Letter of Request to Tshilidzini Hospital

P.O. Box 3119
TSHILOHOYANDOU
0950
04 July 2014

Enq: Mudau AG
Cell: 0790155406
e-mail: mudauazwinndini@gmail.com

The Head of the Department
Department of Health Tshilidzini Hospital
Private Bag X914
Shayandima
0945

Dear Sir / Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT TSHILIDZINI HOSPITAL

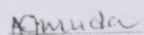
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A questionnaire will be used to collect information from the respondents. The information obtained will be treated confidentially and the summary of the results will be made available to the Province. Attached is the ethical clearance from the University and approval letter from department of health.

Your help in facilitating the research will be highly appreciated.

Yours faithfully



Mudau AG

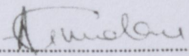
APPENDIX 9: Approval from Tshilidzini Hospital

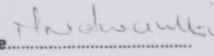
TSHILIDZINI HOSPITAL ETHICS COMMITTEE

Memorandum of understanding

Tshilidzini Hospital Ethics Committee with Mudau AG at their meeting resolved to sign a Memorandum of Understand after the two parties have agreed on the following information

- 1. Reasons for making a research at Tshilidzini Hospital**
-To assess the level of knowledge, attitudes and practice regarding cervical cancer screening and to evaluate the programs
- 2. What will be the benefits of the entire hospital community out of your finding**
-This study will be of significant to the patients, HCP and community.
-After recommendation health care profession will be improved the services reduce death to cervical cancer.
- 3. Who to meet in conducting your research**
All women attending Tshilidzini Hospital above the age of 18years
- 4. What do you do with your finding**
-Copy will be submitted to the department of health encouraging
-Recommendation to improve services
- 5. We will require the hard copy of research**
-Yes
- 6. We do not anticipate any information to be divulged to all types of media without the knowledge of the Ethics Committee and Hospital Board**
- 7. Memorandum of understanding should be signed by both parties**

Researcher's Signature 

Official's Signature 

28 / 08 / 2014

28 / 08 / 2014

Date

Date



APPENDIX 10: Confirmation by Language Editor and Typesetter

FACULTY OF NATURAL SCIENCES

DEPARTMENT OF MEDICAL BIOSCIENCES

Donavon C. Hiss
University of the Western Cape
Private Bag X17
Bellville 7535
South Africa

Tel: 021 959 2334
Cell: 0722001086
Fax: 021 959 1563

E-mail: dhiss@uwc.ac.za or hiss@gmx.us

6 November 2014

To Whom it May Concern

This serves to confirm that I have edited the language, spelling, grammar and style of the Master of Public Health (MPH) thesis by **Azwinndini G. Mudau**, titled: **“KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING CERVICAL CANCER SCREENING AMONG WOMEN ATTENDING TSHILIDZINI HOSPITAL, LIMPOPO PROVINCE.”** The manuscript was also professionally typeset by me.

A handwritten signature in black ink, appearing to be "D. Hiss".

Sincerely Yours

Dip. Freelance Journalism, Dip. Creative Writing, MSc (Medicine), PhD



A place of quality, a place to grow, from hope to action through knowledge