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UNIVERSITY OF THE WITWATERSRAND

FACULTY OF HEALTH SCIENCES



UPTAKE OF VISUAL INSPECTION WITH ACETIC ACID AND CERVICOGRAPHY SCREENING AMONG WOMEN ATTENDING GWANDA PROVINCIAL HOSPITAL IN ZIMBABWE

By

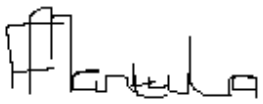
FENNIE MANTULA

A research report submitted to the Faculty of Health Sciences; School of Public Health; University of the Witwatersrand; Johannesburg in partial fulfilment of the requirements for the degree of Master of Public Health in the field of Maternal and Child Health

OCTOBER 2015

DECLARATION OF ORIGINALITY

I, Fennie Mantula, declare that this research report is my own work. It is being submitted in partial fulfilment of the requirements for the degree of Master of Public Health in the field of Maternal and Child Health at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.



Fennie Mantula

19 October 2015

DEDICATION

This study is dedicated to my mother-in-law, Rosina Mantula, who died of cancer.

ABSTRACT

Study title: Uptake of Visual Inspection with Acetic Acid and Cervicography (VIAC) screening among women attending Gwanda Provincial Hospital in Zimbabwe.

Background: Cervical cancer is the second most common cancer among women worldwide. It is the leading in developing countries with 80% of those affected dying from the disease. In 2014, cervical cancer accounted for 33.5% of all cancers affecting women in Zimbabwe. Cervical cancer can be reduced significantly through implementation of effective screening programmes. Such programmes are not performing well in most low resource countries including Zimbabwe due to resource constraints. The aim of this study was to determine the uptake of VIAC screening among women who attend health services at Gwanda Provincial Hospital, and the factors which influence such uptake.

Methodology: The study employed a cross-sectional analytical design. A structured researcher-administered questionnaire was used to collect data from 203 conveniently sampled women who were attending health services at Gwanda Provincial Hospital in November 2014. Data were analysed using descriptive statistics, chi-squared tests and logistic regression models.

Major results: Uptake of cervical cancer screening was found to be low at 14 % of the women sampled. Screening uptake was significantly associated with marital status ($P = 0.05$) and monthly household income ($P = 0.01$). Women who had prior knowledge of cervical cancer were more likely to be screened compared to those who had never heard of the disease ($P = 0.06$). Most women (74%) were aware of the VIAC screening programme but lacked adequate information on its importance.

Dissemination of information on VIAC screening to women attending health services in the institution is not well structured. Lack of information on cervical cancer and VIAC screening was found to be the greatest barrier to the uptake of VIAC.

Conclusion: More aggressive screening awareness strategies at community and health facility levels hold the most promise for improving the uptake of VIAC screening at Gwanda Provincial Hospital.

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TABLE OF CONTENTS

1.2 Background information 1
1.3 Literature review 8
1.3.1 Utilisation of cervical cancer screening services 8
1.3.2 Knowledge of cervical cancer and screening services 9
1.3.3 Factors which influence utilisation of cervical cancer screening services 11
1.4 Conceptual framework 14
1.5 Statement of the problem 15
1.6 Aim of the study 15
1.6.1 Research questions 16
1.6.2 Research objectives 16
1.7 Justification of the study 18
1.8 Conclusion 18
CHAPTER 2: RESEARCH METHODOLOGY 19
2.1 Introduction 19
2.2 Study design 19
2.3 Study setting 19
2.4 Study population 21
2.5 Inclusion criteria 21
2.6 Exclusion criteria 22
2.7 Sample size 22
2.8 Sampling procedures 23
2.9 Study instrument and data collection 24
2.10 Validity and reliability 25
2.11 Data analysis 27
2.11.1 Descriptive statistics 27
2.11.2 Inferential statistics 27
2.12 Ethical considerations 29
2.13 Conclusion 29

CHAPTER 3: RESULTS 30
3.1 Introduction 30
3.2 Results 30
3.2.1 Socio-demographic characteristics of participants 30
3.2.2 Uptake of VIAC screening 35
3.2.3 Participants' knowledge of cervical cancer and VIAC screening 40
3.2.4 Factors influencing the uptake of VIAC screening 46
3.2.5 Participants' suggestions for improving the uptake of VIAC screening 48
CHAPTER 4: DISCUSSION 50
4.1 Introduction 50
4.2 Socio-demographic factors 50
4.3 Uptake of VIAC screening 50
4.4 Knowledge and awareness of cervical cancer and the VIAC programme 53
4.5 Factors influencing the uptake of VIAC 55
4.6 Conclusion 57
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS 58
5.1 Introduction 58
5.2 Conclusion 58
5.3 Recommendations 59
5.4 Limitations of the study 62

LIST OF FIGURES

Figure 1: WHO building blocks for strengthening health systems.....4
Figure 2 : Visual picture of VIAC screen and the corresponding histological grading.....6
Figure 3: Conceptual framework 14
Figure 4: Location of Gwanda town in Matabeleland South Province, Zimbabwe.....21
Figure 5: Knowledge construct depicting knowledge levels on cervical cancer and VIAC screening 26
Figure 6: Percentage distribution of participants by age at first sexual intercourse 33
Figure 7: Percentage distribution of participants by number of lifetime sexual partners 33
Figure 8: Percentage distribution of participants by distance travelled to Gwanda 34
Figure 9 Percentage distribution of participants by VIAC screening status at Gwanda Provincial Hospital since April 2013 37
Figure 10: Percentage distribution of participants by cervical cancer awareness 41
Figure 11: Percentage distribution of participants by awareness of VIAC programme 42
Figure 12: Percentage distribution of participants by source of VIAC information 43

LIST OF TABLES

Table 1: Study variables in relation to the objectives and conceptual framework 17
Table 2: Key variables and data analysis employed 28
Table 3: Socio-demographic characteristics of study participants 32
Table 4: Frequency distribution of failure to take up screening by reason 36
Table 5: VIAC screening status of participants by socio-demographic characteristics 39
Table 6 : Participants' distribution by cervical cancer knowledge levels.....41
Table 7: Association between some variables and awareness of VIAC programme 45
Table 8: Association between awareness of the VIAC programme and awareness of cervical cancer 46
Table 9 : Reasons for satisfaction with health services at Gwanda Provincial Hospital 46
Table 10: Reasons for dissatisfaction with health service delivery 47
Table 11: Perceived barriers to accessing VIAC services 48
Table 12: Recommendations for improving the uptake of VIAC screening 49

LIST OF APPENDICES

Appendix 1: WITS ethical clearance certificate 70
Appendix 2 : MRCZ approval letter 71
Appendix 3: Request letter to conduct research 72
Appendix 4 : Authorisation letter to conduct research 73
Appendix 5 : Information sheet (English version).....74
Appendix 6 : Consent form (English version) 77
Appendix 7 : Information sheet (Ndebele version).....78
Appendix 8 : Consent form (Ndebele version) 82
Appendix 9 : Researcher administered questionnaire (English).....83
Appendix 10 : Researcher administered questionnaire (Ndebele).....91

ACRONYMS

Acronym	Full term
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
BRFSS	Behavioural Risk Factor Surveillance System
CHW	Community Health Worker
CI	Confidence Interval
DNA	Deoxyribonucleic Acid
FP	Family Planning
NHIS	National Health Information System
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HREC	Human Research Ethics Committee
IRB	Institutional Review Board
LEEP	Loop Electrode Excision Procedure
MoHCC	Ministry of Health and Child Care
MCH	Maternal and Child Health
MRCZ	Medical Research Council of Zimbabwe
NGO	Non-Governmental Organisation
OI	Opportunistic Infection
OPD	Outpatients Department
Pap	Papanicolaou
PNC	Post-natal Care
US$	United States Dollars
VIA	Visual Inspection with Acetic Acid
VIAC	Visual Inspection with Acetic Acid and Cervicography
WHO	World Health Organization
YLL	Years of life lost

OPERATIONAL DEFINITION OF TERMS

Term	Operational definition
Uptake of VIAC screening	The proportion of women surveyed during the study period that had been screened for cervical cancer at Gwanda Provincial Hospital using the VIAC method since the launch of the programme in April 2013.
Cervix	The lower part of the uterus. The uterus is a hollow, pear-shaped reproductive organ which is located in a woman's abdomen between the bladder and the rectum. The cervix forms a canal that opens into the vagina, which leads to the outside of the body.
Screening	A procedure done with the aim of identifying early precursor lesions that can be effectively treated usually performed in people who do not yet have symptoms.
VIA	A naked eye visual inspection of the cervix after application of 3-5% acetic acid to detect cervical precancerous lesions
VIAC	A cervical cancer screening method which uses a digital camera to take pictures of the magnified cervix and gives instant results. It is a visual inspection with acetic acid aided by cervicography.
Pap smear	A cervical cancer screening method in which cervical cells are scraped from the cervix and the smear examined for HPV under a microscope.
HPV DNA	A cervical cancer screening test which uses complex technology to detect the DNA content of the cervical cells to find abnormalities that lead to cancer.
Cryotherapy	A treatment modality for cervical precancerous lesions which destroys abnormal tissue up to 3 mm by cold coagulation using cold gas.
LEEP	A large loop electrical procedure used to excise precancerous lesions if they cover more than 75% of the transformation zone, if the lesion has abnormal blood vessels, if the limits of the lesion are not visible, or if lesions persist after cryotherapy.

CHAPTER 1
INTRODUCTION AND LITERATURE REVIEW, AIM AND OBJECTIVES

1.1 Introduction

This chapter begins with an overview of cervical cancer. The condition is defined, its risk factors highlighted and the benefits of cervical cancer screening presented. The chapter explains the most commonly used screening techniques, with emphasis on the Visual Inspection with Acetic acid and Cervicography (VIAC), which is the focus of this study. Possible results from the screening test and their interpretation are given. Literature on cervical cancer screening uptake from both developed and developing countries is reviewed. A conceptual framework is subsequently developed from the reviewed literature to guide the research. The chapter ends with the aim and objectives of the study.

1.2 Background information

Cervical cancer is a malignant neoplasm of the cervical area of the uterus in which cells of the cervix become abnormal and start to grow uncontrollably, forming tumours (1). The cervical epithelial cells initially transform to precancerous lesions and in the absence of treatment, may progress to cancer (2). Cervical cancer has a long latency period of 10–20 years between development of precursor lesions and manifestation of signs and symptoms (3). Regular screening for cervical cancer is an effective means for improving early diagnosis (4).

Cervical cancer is highly preventable and can be cured if precancerous lesions are diagnosed early through screening (5,6). After breast cancer, cervical cancer is the second most prevalent among women worldwide (7). In developing countries, it takes the lead with 80% of cervical cancer deaths occurring among women (8). It is the leading cause of years of life lost (YLL) in women in South Central Asia, Latin America and sub-Saharan Africa, with a great reduction in a woman’s life expectancy (9).

As of 2014 , cervical cancer accounted for 33.5% of all cancers afflicting women in Zimbabwe , with an estimated 1 855 new cases and 1286 deaths recorded every year (10).Statistics on cervical cancer in Zimbabwe show a yearly increase in the number of new cases among the black population (5,11), and a steadily increasing incidence by age from 30 years and reaching the peak at about 50 – 55 years (10).

While the incidence and mortality from cervical cancer has declined steadily in developed countries, it continues to be high in many developing countries (2,12), which carry 83% of the global burden of the disease (13,14).The steady increase in the incidence of cervical cancer can be linked to the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) (15).

The necessary cause of cervical cancer which must be present in all cases of the disease particularly in young women, is the Human Papilloma Virus (HPV) which is sexually transmitted (12,16). The HPV vaccine provides immunity against the HPV strains which cause about 70% of the world's cervical cancers if administered to adolescents before their sexual debut (5,6,8). Additional risk factors for cervical cancer include: early sexual debut, multiple sexual partners, multiparity, history of sexually transmitted infections, excessive tobacco smoking, long term use of oral contraceptives, poor nutrition, genetic factors and immunosuppression (12,17,18). HIV positive women who are immunosuppressed are thus at a higher risk for developing precancerous lesions and may have a more rapid progression to invasive cervical cancer (19).

The large reduction in cervical cancer mortality observed in most developed countries has been attributed to effective screening programmes (20). Such programmes are inefficient in most low-resource countries because screening programmes are not systematic and countries lack the infrastructure and trained personnel required for the technician

dependent, multi-visit testing approach (17). Screening is considered a good protection against cervical cancer because of its ability to detect cancer and precursor lesions to facilitate appropriate triaging and implementation of therapy (21,22). Cervical cancer screening has been proved to significantly reduce the risk of developing cancer by 80% (18). Screening guidelines are available on the appropriate ages at which screening should be done, the screening intervals, and the age at which to exit screening (23). The guidelines are based on the natural history of the disease, ongoing research, and emergent conditions such as HIV which support development of other diseases (23). The incidence of cervical cancer increases between the ages of 20–29 years, peaks at the ages of 55–64 years and declines after 65 years (24).

According to Mutyaba and collegues , cervical cancer screening is recommended between the ages of 30 and 40 years old, when the risk for developing precancerous lesions is at its peak (17).Oche and collegues suggests that women should have their first screening test when they become sexually active and are at risk of acquiring HPV (18). The World Health Organization (WHO) also advocates screening of all women aged 30–50 years at least once before expanding the service to other age groups (8,25). This is dependent on the country's social, cultural and economic contexts (26). Priority for screening is thus primarily targeted at women of child-bearing age who have the highest risk for developing cervical cancer.

The ideal VIAC screening interval is chosen in a way that ensures the least likelihood of development of invasive cancer before the next screen (23). The screening interval is dependent on the results of the previous screening test and should ideally be between two and three years (23,26). Women who are HIV infected should however be screened every year because of their higher risk for developing precursor lesions and the faster rate at which these can progress to cancer (17). Screening of women who are over 65 years and

HIV negative with evidence of three previous VIAC negative screen tests should be discontinued (23). Successful screening in resource-constrained settings requires, among other things; wide access to women at risk, use of the supermarket approach where screening, diagnosis and treatment are all provided at one site, and provision of the service in health facilities which are accessible to the majority of women (27). This is in line with the WHO six building Blocks for strengthening health systems (28). Health systems strengthening involves improving the six health systems building blocks and managing their interactions in ways that achieve more equitable and sustainable improvements across health services and outcomes (28) which in this study is uptake of VIAC screening.

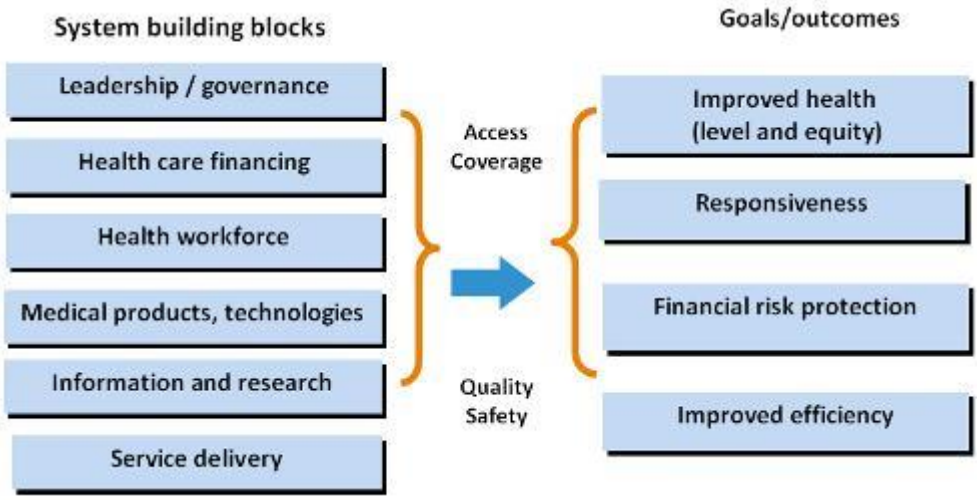


Figure 1: WHO building blocks for strengthening health systems (Source: WHO, 2007)

The cytology based Papanicolaou (Pap) smear is the "gold standard" for cervical cancer screening worldwide (18,29). It has a high specificity rate of 91–99% which means the rate at which women with no cervical abnormalities are correctly identified by the test with normal test results, and a moderate sensitivity rate of 44–48% which is the proportion of all those with the disease that the test correctly identifies as positive (8,19). The moderate to low sensitivity means that there is a high rate of false negative test results; women must therefore screen frequently. The limitations of this screening method

are that it requires adequate health care infrastructure, stringent training and quality control, and it is laboratory based (27). The results are not immediately available and thus requires multiple visits (21). This makes it less suitable for resource-constrained settings. In Zimbabwe, the Pap smear test costs US$20–25 and this is unaffordable to women of low socio-economic status. The test is used mostly in the private sector by those women who can afford it.

Other screening methods include the HPV Deoxyribonucleic Acid (DNA) test and direct visual inspection methods. The colposcopy is an intermediate diagnostic step between screening and treatment (27). The HPV DNA test has a high sensitivity rate of 66–100%, specificity rate of 61–96%, is laboratory based and currently very expensive (27). Low-cost direct visual inspection methods include the Visual inspection with acetic acid (VIA), and the Visual Inspection with acetic acid and Cervicography (VIAC) "screen and treat" techniques which are ideal for use in resource-constrained countries (26).

The VIA and VIAC methods have gained popularity and proven to be adequate alternatives to Pap smears in many developing countries (30). When using the VIA method, the cervix is examined with the naked eye, using a bright light source three minutes after application of acetic acid to the cervix. The normal epithelium remains pink in appearance while abnormal cells turn white (19). Studies have shown that VIA has an estimated sensitivity of 55–99% and a specificity of 64–98% (31).

VIAC is an improvement on the VIA method, in which visual inspection of the cervix is aided by cervicography. This entails using a digital camera to take pictures of the cervix during the procedure, with concurrent view of the results on a screen. VIAC is affordable, requires few resources and can be performed by a wide range of comprehensively trained health workers such as doctors, midwives and nurses (26). The screening results are seen

on a screen within minutes. This allows for a single visit since treatment is provided during screening or immediately after a positive result (26). The incidence of loss to follow up which normally occurs with screening methods where patients need to come back for results or other procedures is reduced (16). The VIAC method however has a higher false positive rate, thus increasing the number of colposcopies required for result confirmation (26).

Possible results from the screening test are; VIAC negative, VIAC positive, or suspicious cancer.

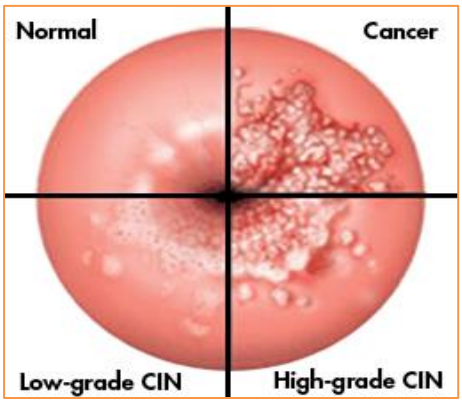


Figure 2 : Visual picture of VIAC screen and the corresponding histological grading (Source: http:www.google.co.zw/images?imgurl)

A VIAC result is considered negative if the cervical tissues appear normal after application of acetic acid. Patients who test VIAC negative are advised to have a repeat routine screen in one to three years in accordance with the screening guidelines (26).

The appearance of well-defined white areas {low and high grade cervical intraepithelial neoplasia (CIN)} after the application of acetic acid indicate a positive result (27). Treatment options depend on the severity of the lesions and include cryotherapy which can be performed by a trained nurse, or loop electrosurgical excision procedure (LEEP) which is performed by a doctor (26). Cryotherapy entails freezing the cervix with liquid

nitrogen coolant therapy to destroy the abnormal epithelial lesions (26). This procedure is indicated if the entire lesion is visible and occupies less than 75% of the ectocervix and does not extend into the cervical os (26). LEEP which entails surgical excision or removal of the transformation zone is indicated if the lesion occupies over 75% of the cervix and extends into the endocervical canal (26).

A suspicious cancer result is when the lesions are very thick, suggestive of invasive cancer and necessitates referral for colposcopy (26). Subsequent treatment for invasive cervical cancer depends on the extent to which the cancer has spread, and may include hysterectomy (removal of the uterus) and/ or radiotherapy and chemotherapy (14).

Zimbabwe currently does not have a mass cervical cancer screening policy (5). Instead, screening is performed on an opportunistic basis on those women who come for other health services such as curative services, family planning, or women who request to have the test (11). Before introduction of the screen and treat methods, the Pap smear was offered routinely on all women attending family planning services at public health facilities (5). Pap smear specimens collected at local health facilities were sent to the national cytology laboratory for testing, which resulted in long delays before results were received. To complement the Pap smear method, the VIA and later the VIAC screening methods have progressively been introduced in public health institutions since 2000 (11,16). The services are provided by trained nurses and offered for free, which make them accessible, with the added advantage of instant results (16).

In Gwanda Provincial Hospital, the VIAC programme was introduced in April 2013. Prior to that, the VIA program had been launched in the early 2000s but discontinued at the height of the economic crisis in 2008 due to shortages of trained staff (16).

Gwanda Provincial Hospital currently has one doctor and two midwives trained in VIAC and only provide screening services. At the launch of the programme the see and treat techniques were used where cryotherapy and LEEP were performed for VIAC positive results. At the time the study was conducted however, VIAC positive patients were being referred to United Bulawayo Hospitals, a national level referral hospital for further management (32). This was because the equipment for performing cryotherapy and LEEP procedures had broken down.

Cervical cancer screening services are also offered by a private Family Planning (FP) clinic within the town at a fee using the VIA method.

1.3 Literature review

International research, including studies conducted in Zimbabwe, has reported many factors which influence the general uptake of cervical cancer screening among women (5,11,33). Some of the findings pertinent to the study are presented in this section.

1.3.1 Utilisation of cervical cancer screening services

A study conducted in India and published in 2013 suggests that women in developed countries have a greater propensity for cervical cancer screening uptake than those in developing countries (29). This finding is supported by other studies which observed that uptake of screening is high in Finland, the United States and Sweden, (2,7,34) among other developed countries. This trend is attributed to the well-established screening protocols inherent in developed countries' health systems (35).

Nwankwo and colleagues in their study on 'knowledge, attitudes and practices among urban and rural Nigerian women' assert that; several developing countries have shown under-utilisation of cervical cancer screening services by women, including health workers

(7). Uptake of screening services by women in Nigeria has been found to be low, ranging between 0% and 10.2% (2,7,35). Women state that it is not possible to use what they do not know about and some only undertake screening on recommendations of health providers if they have gynaecological problems (35).

These findings are not peculiar to Nigeria. A 15% utilisation rate was reported among hospitalised women in India (36), 38% among clinic attendees in Jamaica (34), and 19% among health workers in Uganda, the majority of whom had never recommended or referred any patients for screening (17). This has implications on uptake of screening since a low motivation for utilising the service among health providers might send wrong signals towards utilisation of the service by the general population (18).

In Zimbabwe, a comparative study conducted in two districts one of which had a health facility providing screening services revealed utilisation rates of 4.3% and 4.2% respectively (11). In yet another study which sought to determine screening behaviours in another district, the utilisation level was determined to be 9% (5).

Reasons for low uptake of cervical cancer screening services have been identified in many studies as demographic, personal, cultural and health service-related (5). Countries such as South Africa, Ghana, Kenya, Thailand, Peru and India among others have developed strategies to increase the uptake of screening (37) from which Zimbabwe can draw lessons.

1.3.2 Knowledge of cervical cancer and screening services

Most women particularly in the low socio-economic bracket have limited knowledge of cervical cancer and available screening services (38). This may be a factor contributing to the low uptake of screening services. Women with low levels of cervical cancer knowledge and its prevention are unlikely to access screening services (39).

A severe lack of knowledge on cervical cancer and its prevention due to poor education of mothers has been established (7) with some women reporting not ever having heard about the disease (35).Rural based women are the most affected (27,40). Women are aware of breast cancer from health talks given during antenatal care (ANC) clinics, but not of cervical cancer (35). While screening acceptance is strongly associated with having knowledge on cervical cancer and its risk factors and prevention, poor knowledge on cervical cancer is evident among women (41). Other studies suggest that women are aware that screening is used to detect cervical cancer, but are unaware that it can also detect treatable precancerous lesions (29).

Studies from Latin America also confirm a correlation between a lack of understanding on cervical cancer being preventable, and low uptake of screening services (34). Women who may have heard about screening still lack clarity on its purpose and how the procedure is performed (42). Adequate information on screening could assist eligible women to make informed decisions about taking the test.

Evidence suggests that a very low proportion of women in many developing countries have heard of cervical cancer screening programmes. Low programme awareness of 15.5% and 38% in Nigeria (2,7), 62% in Tanzania (41) and 15% in India (36) have been reported.

Inadequate knowledge about the need and importance of screening has been noted as the major reason for failure to utilise cervical cancer screening services in Zimbabwe (11). The same reason could be true in relation to the uptake of VIAC at Gwanda Provincial Hospital.

Lack of awareness about cervical cancer could partly be due to ineffective communication strategies on the part of health service providers (36). This poses a big challenge in getting women motivated to undergo cervical cancer screening. It is hoped that education of women on the subject may have improved in recent years.

1.3.3 Factors which influence utilisation of cervical cancer screening services

Demographic factors

Utilisation of screening services has been found to be directly proportional to parity, age and marital status (36,43). Older married women with more children have increased awareness of reproductive health programmes and are more likely to utilise screening services (36). Inversely, single nulliparous women may feel stigmatised if they attend reproductive health clinics (36). In other studies conducted in Tanzania and Jamaica however, women with 0–2 children were more likely to access screening than women who had five or more children (41,43).

According to Mupepi and colleagues, women aged more than 45 years old were less likely than younger women to access cervical screening (5). Other studies concur that women in the younger age groups are more likely to have screening compared to those who are older (34,43). This may vary with knowledge levels, perceived risk for cervical cancer and cultural beliefs in different settings. This study intends to explore this in relation to women who attend health services in Gwanda Provincial Hospital.

Women's occupations determine the time at their disposal for attending health services and the availability of finances to pay for the services (5,34). Those in salaried jobs may encounter problems accessing the service due to the inflexible clinic operating hours which may not be in alignment with their free time (6). With the exception of transport costs, financial factors should not be a hindrance to accessing the service in Gwanda, because no payment is required for VIAC screening.

Higher levels of education have been shown to increase the uptake of cervical cancer screening as better educated women are more likely to have knowledge on cervical cancer and screening than the less educated (2,5,38).However, other studies have revealed that

despite the high level of education and good knowledge on screening, some women still do not utilise the services (2,5,24,38). This may be attributed to other factors not related to knowledge, which this study intends to establish. It has been established that knowledge does not always translate into behaviour, but improved knowledge has been found to increase uptake of cervical cancer screening in most settings (1). Interventions to achieve success in the VIAC programme should thus focus on activities that build knowledge and address the myths and misconceptions about cervical cancer screening. Such an approach could increase acceptability of the screening programme and subsequently increase the uptake.

Women residing in urban and mining towns have a higher likelihood of utilising screening services compared to women in rural areas because of the better access they have to health facilities and their higher levels of income (5,7,36,44).

Personal and cultural factors

In some cultures, discussing reproductive health issues is taboo hence women may find it embarrassing to go for screening (36). Most women also find it uncomfortable to be examined by male doctors and nurses and may then choose not to be screened (36,42).

Women who perceive themselves as not being at risk for cervical cancer have been found to be less likely to utilise screening services (34,36,42). While most women understand that cervical cancer screening detects cervical cancer at an early stage, they do not see themselves as being at risk of developing cancer if they do not have any symptoms (1,34). Studies have also revealed that most women know that cervical cancer is a serious disease with serious consequences, but still do not screen for this disease (1). Compared to curative services, preventive services such as cervical cancer screening are not viewed as a priority

by women in most low resource countries (1). All this revolves around the level of knowledge which women have on cervical cancer, which will be explored in this study.

A recent study showed that women are most often too busy with household chores and leaves them with no time to seek health services (45). The present study was however conducted in a hospital setting on those women who already had positive health seeking behaviours. The views of those who are too preoccupied to visit health facilities may have been missed.

Some women lack the support of their male partners for screening. Women's submissive role implies that they may not be in a position to take any decision without spousal approval (45). On the contrary, a Non-Governmental Organisation (NGO) VIAC screening centre in a big city in Zimbabwe observed that there was general support from men who encouraged their wives to go for screening (46). The differences in men's behaviour may be dependent on the socio-cultural contexts in different settings.

Personal factors which seem to have a positive impact on screening uptake are knowledge and awareness of the disease and the benefits of screening (5,34,36,42).

Health service-related factors

Health system barriers to accessing screening services include; failure by health service providers to create awareness on cervical cancer, benefits of screening, and screening procedures (5,35,38,41), long waiting times before getting attended to, negative staff attitudes (36,38,42), long distances to the health facility (5,25,42), lack of quality reproductive health services at health facilities, unavailability of screening services at local facilities (5), rigid operating hours (42), and unaffordable service fees (5,42).

A study conducted in Uganda revealed that availability of cervical screening centres were an enabling factor for uptake of screening (45). The criticality of taking the screening services nearer to the communities for improved uptake of the programme has also been highlighted (47). VIAC screening services in Gwanda district are only provided at the tertiary institution. This study will prove if uptake of screening is being influenced by proximity to the screening centre.

1.4 Conceptual framework

In order to conceptualise the context specificity of the uptake of VIAC screening at Gwanda Provincial Hospital, a framework which shows the different constructs to be investigated was developed to give direction to the study.

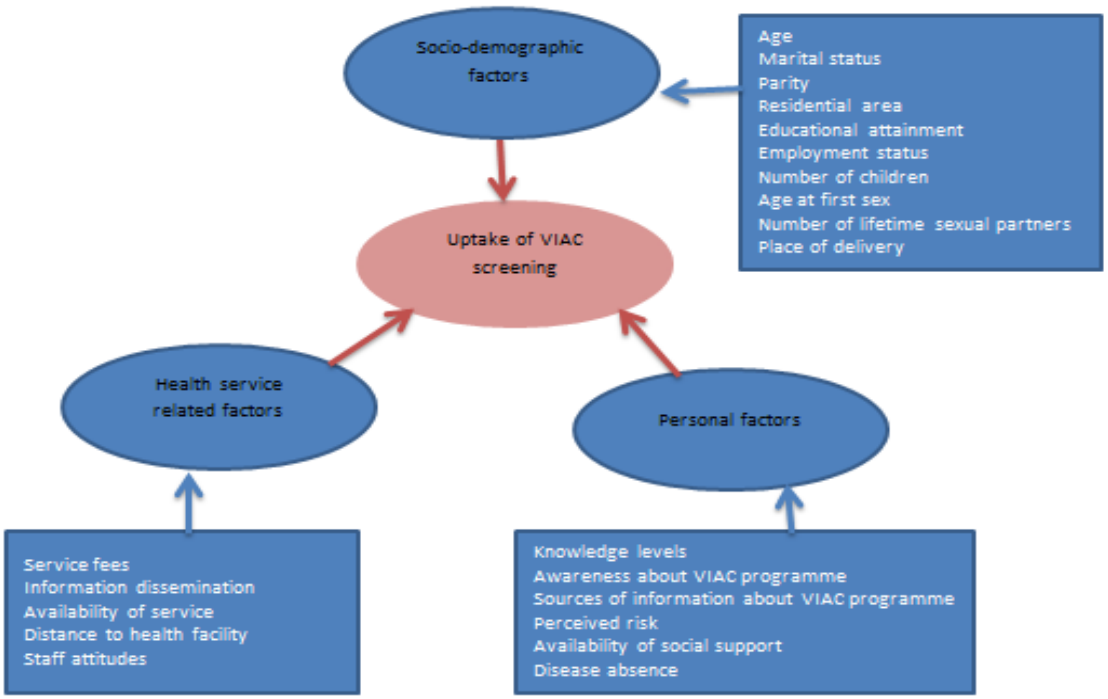


Figure 3: Conceptual framework

The variables in this study were: VIAC uptake (dependent variable), knowledge of cervical cancer and screening services and barriers to accessing VIAC services (independent

variables). These were linked to socio-demographic, personal and health-related components of the conceptual framework, which was developed from the review of literature. Research questions for the study were derived from this conceptual framework.

1.5 Statement of the problem

Cervical cancer screening uptake in Zimbabwe is currently low at 5.2 % and 10.8% in rural and urban areas respectively, and mostly limited to national and provincial hospitals (33).

Effective screening programmes could significantly reduce the incidence of cervical cancer (48). Gwanda Provincial Hospital is among the few public health institutions in the country and the only one in Matabeleland South province which currently provides VIAC services.

Uptake of VIAC screening centralised to this tertiary health facility should be high considering that it caters for women referred from all public health facilities in Gwanda district and other districts within the province. The institutional statistics indicate an average VIAC screening attendance of 102 women per month (32). This attendance is very low compared to that for other Maternal and Child Health (MCH) and medical services (32). It has not been established if attendees on non-VIAC services have accessed screening from this tertiary facility or other service providers, or if they have never been screened. It is against this background of a high attendance on other health services and a low attendance on VIAC that concern is raised on the overall VIAC screening status of women attending Gwanda Provincial Hospital.

1.6 Aim of the study

The aim of this study was to determine the uptake of VIAC screening among women who attend health services at Gwanda Provincial Hospital in Zimbabwe, and the factors which influence the screening uptake.

1.6.1 Research questions

In response to the concern raised in the research problem, the study was carried out to answer the following research questions:

1. What is the uptake of VIAC screening by women who attend health services at Gwanda Provincial Hospital?
2. What factors are associated with VIAC screening uptake among women who attend health services at Gwanda Provincial Hospital?

1.6.2 Research objectives

The specific objectives of the study were to:

1. determine the uptake of VIAC screening by women attending health services at Gwanda Provincial Hospital in November 2014
2. assess the knowledge and awareness on cervical cancer and the VIAC screening programme among women attending health services at Gwanda Provincial Hospital in November 2014
3. determine the factors which influence uptake of VIAC services among women attending health services at Gwanda Provincial Hospital in November 2014.

Based on the conceptual framework and objectives, the following variables were explored.

Table 1: Study variables in relation to the objectives and conceptual framework

Objective	Conceptual framework element	Variable measured
To determine the uptake of VIAC screening	Uptake of VIAC screening	Uptake of VIAC screening: Ever had VIAC screening at Gwanda Provincial Hospital since its launch in April 2013 What was the reason for screening? Who suggested the screening test
Assess the knowledge and awareness on cervical cancer and the VIAC screening programme	Personal factors	Ever heard of cervical cancer? Is cervical cancer a public health problem in Zimbabwe? Cervical cancer can lead to death Risk factors for cervical cancer Signs and symptoms of cervical cancer Ever heard of the VIAC screening programme? Source of information about VIAC VIAC screening can detect changes in the cervix before they progress to cancer Regular VIAC screening can prevent cervical cancer If changes are detected early from VIAC screening they can be cured
Determine the factors which influence uptake of VIAC services	Socio-demographic factors Health service related factors Personal factors	Age Marital status Parity Residential area Educational attainment Employment status Age at first sex Number of lifetime sexual partners Place of delivery Distance to health facility Availability of service Satisfaction with services Information dissemination at facility Disease absence Perceived risk Prior knowledge of cervical cancer

1.7 Justification of the study

Previous research on cervical cancer screening uptake in Zimbabwe has been conducted in rural community settings (5,11). These studies revolved around knowledge, attitudes and factors which influence screening behaviour among women, with a focus on the accessibility of services. The researcher is not aware of any hospital-based studies which have been conducted. Thus there was a need to carry out this study to fill the knowledge gap. Exploring the situation from a health facility which even offers VIAC services eliminates the barrier of service unavailability as a reason for low uptake. This study intended to identify other barriers towards accessing the available service. An understanding of these factors would provide a basis for the design of appropriate strategies in the scale up of the programme at Gwanda Provincial Hospital.

1.8 Conclusion

This chapter described the background of cervical cancer and the uptake of screening services. Screening programmes in many developing countries including Zimbabwe are inefficient due to resource constraints. The VIAC method has been found to be effective for cervical cancer screening in low resource countries because of its reduced demand on material and human resources. This method is available at Gwanda Provincial Hospital but the service appears to be under-utilised. Literature was critically reviewed to identify variables that have been found to have an influence on screening behaviours. Health service-related factors, demographic and social factors have been found to have a bearing on the uptake of screening. Clues were provided on approaches and research methods used in other studies and these will be addressed in the next chapter. A conceptual framework was developed from the reviewed literature to guide the study. The chapter ended by highlighting the aim and objectives of the study.

CHAPTER 2: RESEARCH METHODOLOGY

2.1 Introduction

This chapter presents the methodology applied to this study which set out to determine the uptake of VIAC services at Gwanda Provincial Hospital since the launch of the programme in April 2013. The study design, study setting, target population, sample size and sampling procedures are described. The inclusion and exclusion criteria are explained with a brief description of the data collection process. The data analysis plan and ethical principles used to protect the integrity of the study are also discussed.

2.2 Study design

In order to address the three study objectives at a single point in time, a cross-sectional analytical study design was used to collect data using a researcher administered standardised questionnaire.

2.3 Study setting

The study was conducted in Gwanda Provincial Hospital, one of the eight tertiary health institutions run by the Ministry of Health and Child Care (MoHCC) in Zimbabwe. Zimbabwe is a landlocked country situated in Southern Africa (49).The country is divided into 10 administrative provinces that include urban Harare and Bulawayo as depicted in Figure 3. The other eight provinces are mainly rural and are made up of a total of 62 districts (49).Women and children comprise over 70% of the population and 67% of the population resides in rural areas (50).The main causes of illness and death in Zimbabwe have been identified through the National Health Information system (NHIS) as; HIV and AIDS, Tuberculosis, Diarrhoea, Childhood Illnesses, Malaria, Malnutrition, Injuries,

selected non-communicable diseases and Reproductive Health and Pregnancy related conditions (50).

Gwanda Provincial Hospital is located in the town of Gwanda, the capital city of Matabeleland South province which is comprised of six districts. According to the 2012 census, Gwanda District within which the provincial hospital is located consists of urban, mining and rural communities with a total population of 139 480 (51). The 200-bed provincial hospital provides preventive, promotive, supportive, curative and rehabilitative services, including the treatment of minor and major illnesses, maternity care services, dental services, eye care, mental health, emergency care, HIV care and in patient care for major illnesses (32). The Reproductive Health services offered include: antenatal care, postnatal care, family planning and VIAC screening. The institution is also a training centre for general nurses, midwives, and environmental health technicians. On average, approximately 856–1,360 adult females seek outpatient health care every month (52).

The tertiary institution serves as a referral centre for 29 primary health facilities located in Gwanda district and five district hospitals (secondary level facilities) located in districts within Matabeleland South Province. However, because of the geographical set up, only one district hospital uses this referral route with the other four referring directly to national level hospitals (49). Some primary health facilities in the bordering two districts are situated further away from their district hospitals (secondary referral centres) but nearer to Gwanda Provincial Hospital (tertiary referral centre). Some patients hence bypass the secondary level and refer themselves to the tertiary level. The referral system is thus not fully functional (49).

Gwanda Provincial Hospital was selected for the study because it is currently the only public health facility in the province which provides VIAC services. Plans are however underway to roll out the programme to other districts.

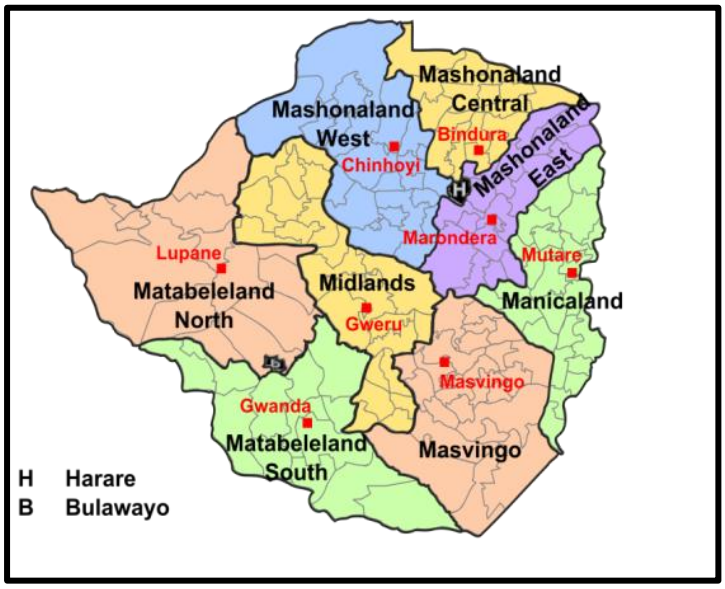


Figure 4: Location of Gwanda town in Matabeleland South Province, Zimbabwe. (Source: www.mapsofworld.com)

2.4 Study population

The population for this study consisted of all women aged 18 years and above who accessed health services at Gwanda Provincial Hospital during the month of November 2014 and who had accessed VIAC screening prior to the period of the study. This is the group which meets the eligibility criteria for VIAC screening and who could provide their own consent for participating in the study.

2.5 Inclusion criteria

Consenting women aged 18 years and older attending the outpatients department (OPD), Opportunistic Infections (OI) clinic which provides HIV care, and MCH units which include the antenatal, post-natal, family planning (FP), child welfare clinics and maternity

unit were included in the study. Participants had to be resident in Gwanda District for at least one month, or in any of the districts whose primary referral centre for tertiary care was Gwanda Provincial Hospital. This period was considered to be long enough for them to have heard about the VIAC service being offered at the tertiary institution.

2.6 Exclusion criteria

Very ill patients who could not take the strain of prolonged questioning were excluded from the study. Women who had not yet engaged in sexual activities were also not included even if they were of eligible age. Women attending the VIAC clinic during the study period were also excluded as the study sought to evaluate uptake prior to the study.

2.7 Sample size

The sample size was determined using the Dobson's formula for cross-sectional studies (53), which takes into account: the estimated prevalence being studied, the absolute precision required for the study, and the required confidence interval. The estimated prevalence of cervical cancer screening uptake in Zimbabwe was roughly 7% from the reviewed literature (5), absolute precision required for the study was 5%, and the required confidence level 95%. The formula is given as:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Where: n = sample size,

Z = 1.96

p = 7%

d = 0.05.

Therefore $n = \frac{1.96^2 \times 0.07 \times (1-0.07)}{0.05^2}$

= **100.035264**

While 100 women provided an adequate sample size for this study, the number of participants was doubled to increase statistical power (54,55).

Of the 212 women approached, seven declined to participate, with two not comfortable to give their consent in writing while the rest were rushing to catch transport back to their rural homes.

The response rate of 96.7% for a face to face administered questionnaire was considered as acceptable to make the results representative of the target population (56).

2.8 Sampling procedures

Convenience sampling was employed to recruit into the study; all eligible women aged 18 years and above who were available at the OPD, OI , MCH clinics and maternity unit, and capable of giving their own consent to participate (57). The researcher was introduced by the hospital authorities to the officials in charge of the units in which the study would be conducted. The persons in charge of the units in turn introduced the researcher to the women during the morning routine group health education sessions and sensitised them about the study.

The researcher approached the women on exit from the consultation rooms after they had been attended to and explained the purpose of the study to individuals or groups depending on the numbers available. A written informed consent was obtained from those who agreed to participate prior to administration of the questionnaire by the researcher. Recruitment of participants after accessing services was meant to avoid disruption of hospital activities and

also to control for information bias. It was envisaged that if data were to be collected prior to service delivery, participants would not give objective responses, assuming that the responses they gave would affect the quality of service they would receive.

Since the OPD, OI and MCH units are situated at three different locations within the hospital premises, the researcher would cover a different unit each day when recruiting participants.

The process was repeated on new clients who came for services each day until the required sample size was achieved. Since the data collection process took two weeks, the researcher checked with each prospective participant if they had not been previously interviewed to avoid duplication in data collection on patients who came for repeat visits.

2.9 Study instrument and data collection

A structured researcher-administered questionnaire was used to collect data. This was meant to improve the quality of data collection and also to cater for the illiterate. The questionnaire was translated into Ndebele for those who did not understand English and also to meet the requirements of the Medical Research Council of Zimbabwe (MRCZ). Depending on the participant's level of understanding, the questionnaire was administered in Ndebele or English, and recorded in the English version of the instrument for ease of data entry.

The California Behavioural Risk Factor Surveillance System (BRFSS) questionnaire (58) adapted by Mupepi et al. for the study on "knowledge, attitudes, and demographic factors influencing cervical cancer screening behaviour of Zimbabwean women" was further adapted for use in this study.

The questionnaire took about 15–30 minutes to complete depending on the applicable skip options and sought information on socio-demographic data, utilisation of VIAC services,

knowledge on cervical cancer and screening services, factors affecting the uptake of VIAC, and recommendations for improved uptake of VIAC services at Gwanda Provincial Hospital. Each of the questions was read out to the participants and the given response ticked on the questionnaire by the researcher. This included the two questions which had multiple responses. All the responses were read out and the participant asked to give their response on each of them.

2.10 Validity and reliability

The Medical Superintendent of Gwanda Provincial Hospital, who holds a Master in Public Health degree, evaluated the questionnaire for clarity, content validity and coverage of objectives and also gave some input into improving the data collection instrument. The project supervisor also checked out the questionnaire before the study was piloted.

The questionnaire was pretested a week prior to the main study on a sample of 20 women attending OPD, OI and MCH services. Questions on age, parity, educational attainment and employment status under socio-demographic data were recategorised to bring out more meaningful results. Questions on sexual debut and number of lifetime sexual partners were added as they had generated a lot of interest when asking about risk factors for cervical cancer.

The five-scale response options were revised to “Yes” and “No” as that is how most participants responded. The open-ended question on recommendations to improve the uptake of VIAC was converted into a closed question for the main study after obtaining possible responses to the question from the pilot study. The questions were then rearranged to create a logical flow. The modified questionnaire was reviewed for validity based on the previously noted flaws.

The standard questionnaire was administered by the same researcher on a sample as diverse as possible in terms of health services being sought, age, parity and residential area to ensure sample representativeness of the study population.

Knowledge of cervical cancer was rated based on the knowledge construct which was created using the following questions; have you ever heard of cervical cancer? Is cervical cancer a public health problem among women in Zimbabwe? Risk factors for cervical cancer and signs and symptoms of cervical cancer (knowledge scale had 9 and 6 items respectively), have you ever heard of the VIAC screening programme? VIAC screening can detect changes in the cervix before they progress to cancer, Regular VIAC screening can help prevent cancer and, if changes are detected early they can be easily cured. The researcher read out the questions and the responses and appropriately ticked the correct response as was given by the participants. Using STATA, a reduction method was used to create a knowledge variable which included all the singular variables on knowledge. The Cronbach's reliability coefficient was 0.7510. A score of below 0 was rated as limited knowledge, a score of between 0 and 1 as fair knowledge while a score of above 1 was rated as good knowledge (Figure 5).

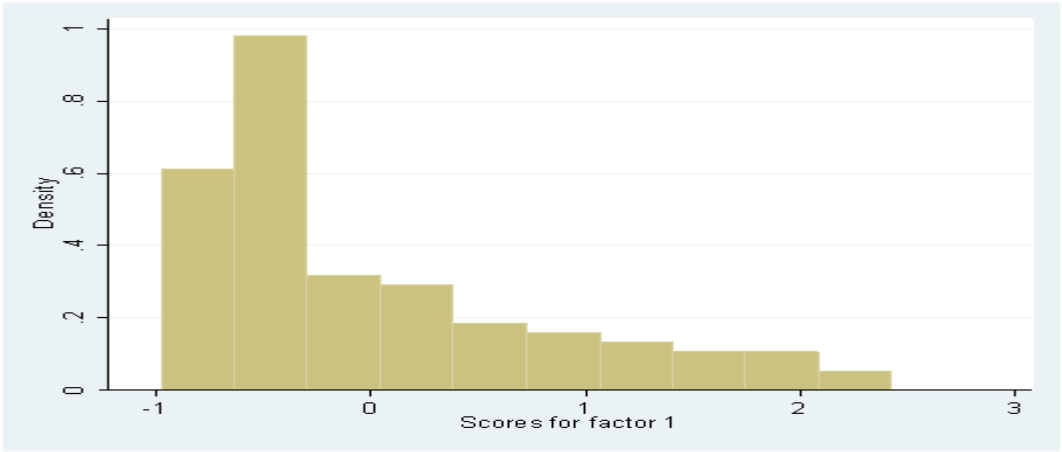


Figure 5: Knowledge construct depicting knowledge levels on cervical cancer and VIAC screening

2.11 Data analysis

Completed questionnaires were checked for completeness and incorrectly entered information soon after data collection. Two questionnaires were excluded from analysis because the respondents were neither residents of Gwanda district nor of any of the districts in Matabeleland South Province, but were visitors.

Questionnaires were coded and data entered into a computer programme EPI Info version 7. Data were rechecked to eliminate errors which could have occurred during data entry and then exported to STATA version 13 for analysis. (57). As a quality control measure, a 10% random check on entered data was performed by an experienced person who assisted the researcher on multivariate statistical analysis (57).

2.11.1 Descriptive statistics

Results from analysis of categorical variables were summarised using descriptive measures expressed as percentages. The distribution of data is presented in frequency tables, pie charts and column graphs.

Uptake of VIAC was expressed as the proportion of women who had been screened for cervical cancer using the VIAC method at Gwanda Provincial Hospital since the launch of the programme in April 2013 .

2.11.2 Inferential statistics

The chi-squared test was used to test for associations between uptake of VIAC and demographic factors and some selected knowledge variables, with the level of statistical significance set at $P \leq 0.05$. Bivariate analysis tested for statistical significance of the association between some variables and uptake of VIAC screening.

The key variables measured and methods of data analysis are given in Table 2 below.

Table 2: Key variables and data analysis employed

Objective	Variables	Data analysis plan
To determine the uptake of VIAC among women attending Gwanda Provincial Hospital in November 2014	Dependent variable VIAC uptake : categorical and binary	Descriptive statistics Proportion of women who had had VIAC screening at Gwanda Provincial Hospital since April 2013, out of the total number surveyed (excluding those seeking screening during the study period).
To assess the knowledge and awareness on cervical cancer and VIAC screening among women attending health services in November 2014	Independent variables ✓ Knowledge of cervical cancer: Yes / No – categorical (binary). ✓ Cervical cancer perceived as a public health problem among women: categorical ✓ Risk factors for cervical cancer : categorical ✓ Ever heard of VIAC programme : categorical	Descriptive statistics Frequency distribution of responses Inferential statistics Chi-squared test
To determine the factors which influence uptake of VIAC screening among women attending Gwanda Provincial Hospital in November 2014	Independent variables ✓ Age : categorical ✓ Marital status: categorical (nominal). ✓ Parity : categorical ✓ Educational level: categorical-ordinal. ✓ Employment status: categorical (nominal). ✓ Monthly household income: categorical. ✓ Residential area: categorical ✓ Distance from Gwanda : categorical ✓ Satisfaction with hospital services (binary) ✓ Barriers to VIAC uptake: categorical (nominal).	Descriptive statistics Frequency analysis Proportions Inferential statistics 1. Chi-squared test for categorical variables. 2. Bivariate and multivariate logistic regression to identify variables related to VIAC uptake

2.12 Ethical considerations

The Human Research Ethics Committee (HREC) of the University of the Witwatersrand granted ethical clearance for the study (Appendix 1). Approval of the study was also obtained from the Medical Research Council of Zimbabwe {(MRCZ) (Appendix 2)}. Permission to conduct the research was then granted by the Gwanda Institutional Review Board {(IRB) (Appendix 4)}.

A written informed consent was sought from the participants on exit after they had received the services they had come for. The fact that consent was sought after health services were provided was meant to control for information bias. The purpose of the study was explained, with emphasis on the voluntary nature of participation and confidentiality on the information that would be provided. To ensure confidentiality of participants' information, no identifiers were included in the questionnaire. Eligible participants who were not willing to participate were not coerced, and those who consented were informed of the option to withdraw from the study at any stage of questionnaire administration without suffering any prejudice.

2.13 Conclusion

This chapter described the research design which was used in the study and the motivation for selecting this research design. The setting of the study was also described The methodology which includes the study population, inclusion and exclusion criteria, sampling, data collection instrument, data collection procedures, data analysis, validity and reliability and ethical considerations applied to the study were discussed.

The next chapter focuses on the results of the study.

CHAPTER 3: RESULTS

3.1 Introduction

This chapter presents the findings of the study in descriptive and inferential form. The first section gives a description of the socio-demographic characteristics of the participants. The succeeding sections present results related to the participants' uptake of VIAC screening, knowledge of cervical cancer and screening , and the factors influencing uptake of VIAC screening in line with the study objectives. Findings on suggestions for improved uptake of the service are also presented as given by the participants.

3.2 Results

3.2.1 Socio-demographic characteristics of participants

A total of 203 participants were surveyed. A summary of some socio-demographic characteristics of the study participants is given in Table 3.

3.2.1.1 Age and marital status

More than half the participants were aged between 20–39 years. Sixty-six (32.5%) were in the 20–29 years age range and 63 (31%) aged between 30–39 years. Women aged below 20 years and older women aged 60 years and above were the least represented at 16 (7.9%) and 12 (5.9%) respectively. Most of the participants were married or living with their partners 136 (67%), and the majority of their spouses were either employed 68 (49.6%) or self-employed 49 (35.5%).

3.2.1.2 Number of children, educational attainment and residential area

Most participants had between one and four children 149 (73.4%) with only 12 (5.9%) having no children. The majority had attained at least a secondary/high school education 134 (66%). Just over half of the participants 105 (51.7%) resided in the rural areas.

3.2.1.3 Employment status and financial situation

Only 57 (28.1%) of the participants were formally employed and although 80 (39.8%) were financially independent, the majority were dependent on their spouses or parents, working children or other relatives particularly in the case of single and older participants.

3.2.1.4. Monthly household income

Just above half the number of participants 105 (51.7%) had a monthly household income of US$100–500 followed by 80 (39.4%) who earned a monthly household income of less than US $ 100.

Table 3: Socio-demographic characteristics of study participants (*n* = 203)		
Variables	**Frequency (*n*)**	**Percentage (%)**
Age (years)		
Below 20	16	7.9
20–29	66	32.5
30–39	63	31
40–49	28	13.8
50–59	18	8.9
60+	12	5.9
Total	**203**	**100**
Marital status		
Never married	30	14.8
Married/living with partner	136	67
Divorced / separated	18	8.8
Widowed	19	9.4
Total	**203**	**100**
Number of children		
0	12	5.9
1–2	84	41.4
3–4	65	32
5+	42	20.7
Total	**203**	**100**
Educational attainment		
Primary school or less	54	26.6
Secondary / High school	134	66
Tertiary / College	15	7.4
Total	**203**	**100**
Residential area		
Rural	105	51.7
Urban	69	34
Mine	29	14.3
Total	**203**	**100**
Employment status		
Full time housewife	38	18.7
Unemployed	75	36.9
Self employed	33	16.3
Formally employed	57	28.1
Total	**203**	**100**
Monthly household income (US$)		
Less than 100	80	39.4
100–500	105	51.7
501–1000	13	6.4
Above 1000	5	2.5
Total	**203**	**100**

3.2.1.5 Age at first sexual intercourse

As Figure 6 shows, 119 (58.6%) of the participants were aged between 15 and 19 years when they first engaged in sexual intercourse and a marginal 10 (4.9%) had first engaged in sex when they were aged 25 years and above.

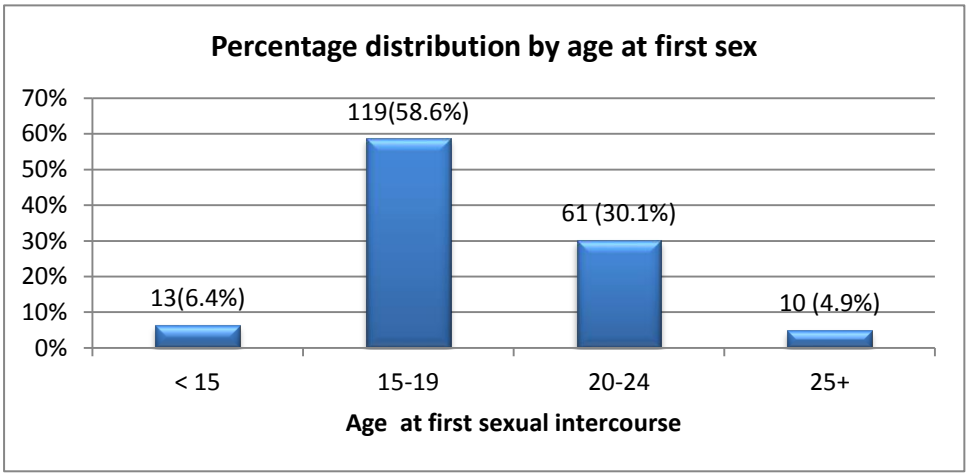


Figure 6: Percentage distribution of participants by age at first sexual intercourse (n = 203)

3.2.1.6 Number of lifetime sexual partners

One hundred and two (50.3%) participants reported between two to four lifetime sexual partners while 35 (17.2%) reported more than four lifetime partners as shown in Figure 7.

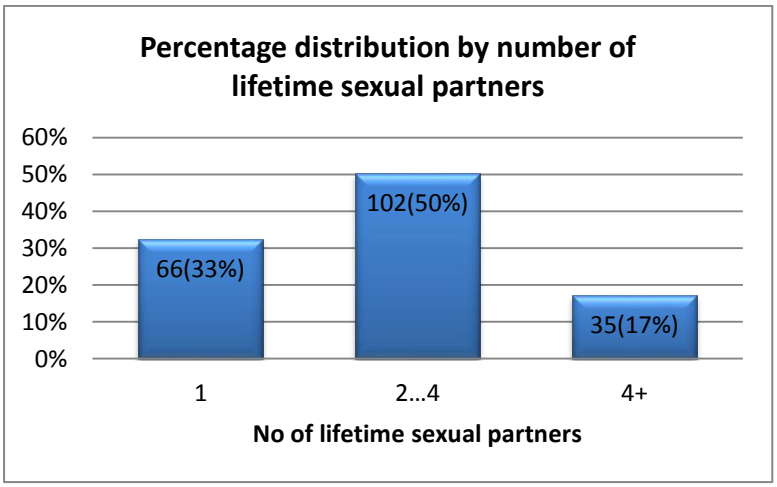


Figure 7: Percentage distribution of participants by number of lifetime sexual partners (n = 203)

3.2.1.7 Distance from usual primary health facility to Gwanda Provincial Hospital

Participants normally accessed health services from rural, urban and mine primary health facilities depending on their places of residence. Those who normally attended health facilities located outside Gwanda District were asked why they had come to Gwanda Provincial Hospital on that particular day. Reasons given (n = 11) were: referral to the tertiary institution by their secondary level health facilities 4 (36.4%), and self-referral for preference of better resources in terms of the availability of staff and medicines 7 (63.6%). From their primary health facilities, the majority of the participants travelled more than 20km, 94(46.3%) and between 11–20 km 35 (17%) to reach Gwanda Provincial Hospital as illustrated in Figure 8.

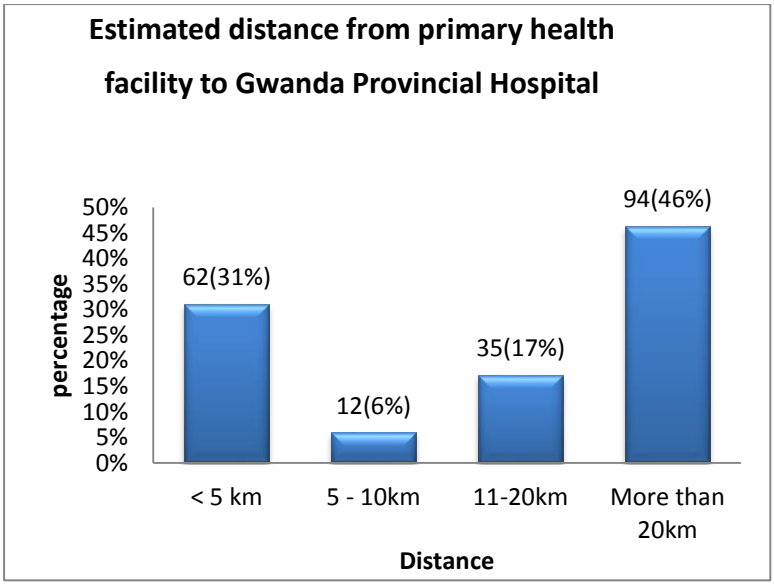


Figure 8: Percentage distribution of participants by distance travelled to Gwanda (n = 203)

3.2.1.8 Place of delivery for last pregnancy

While the majority of the participants 173 (90.6%) had delivered at health facilities during their last pregnancy of which Gwanda Provincial Hospital accounted for 96 (50.3%) of the

deliveries, only 38 (22 %) of the participants had received information on cervical cancer screening (n = 173).

3.2.2 Uptake of VIAC screening

This section highlights the VIAC screening status of participants and the factors associated with uptake of VIAC screening.

3.2.2.1 Participants' cervical cancer screening status

In order to get a general picture of the screening status among women attending Gwanda Provincial Hospital, participants were asked if they had ever been screened for cervical cancer irrespective of screening method and place. Only 38 (18.7%) of the participants had ever been screened for cervical cancer. The 165 (81.3%) participants who had never been screened were asked to give their reasons. Responses obtained are summarised in Table 4 .

3.2.2.2 Reasons for not screening

The most commonly cited reasons were; never having heard about the cervical cancer screening programme or having heard of it only recently 123(52.1%), lack of adequate information on screening to make an informed decision 28 (11.9%), lack of money for service fees and/or transport to Gwanda 16 (6.8%), and perceived good health 13 (5.5%).

Table 4: Frequency distribution of failure to take up screening by reason (n = 165)		
Reason for not screening	**Frequency**	**%**
Have never heard of the programme or only heard of it recently	123	52.1
Lack of full information about the programme	28	11.9
No money for screening and/or transport costs	16	6.8
Perceived good health	13	5.5
Just reluctant	12	5.1
Too busy, no time to go for screening	11	4.7
Lack of knowledge on where services are offered	10	4.2
Lack of approval from spouse	6	2.6
Screening services not available at local clinic	6	2.6
I am formally employed and the clinic closes on weekends	4	1.7
Nurses do not promote the programme	2	0.8
Fear of knowing I have cancer	2	0.8
Others say it is painful	2	0.8
I am no longer sexually active	1	0.4
Total responses	**236**	**100**

3.2.2.3 Period when screened and motivation for screening

The 38 (19%) participants who had been screened were further asked if they had undergone VIAC screening after the programme had been launched at Gwanda Provincial Hospital in April 2013.Thirty five (92.1%) had had VIAC screening since that period and 29 (76.3%) had been screened at Gwanda Provincial Hospital. The major reason for screening had been gynaecological problems 23(60.5%).

The majority of the participants had requested for the test themselves 25 (65.8%), while 12 (31.6%) had been advised by either a nurse or doctor to have the test.

Almost all the screened participants 36 (94.7%) had had the opportunity of discussing the results with their service providers and most 34 (89.5%) had shared their results with family members and friends.

3.2.2.4 VIAC uptake distribution

Twenty nine (14%) of the participants had been screened at Gwanda Provincial Hospital using the VIAC method since the launch of the programme in April 2013 as shown in Figure 9.

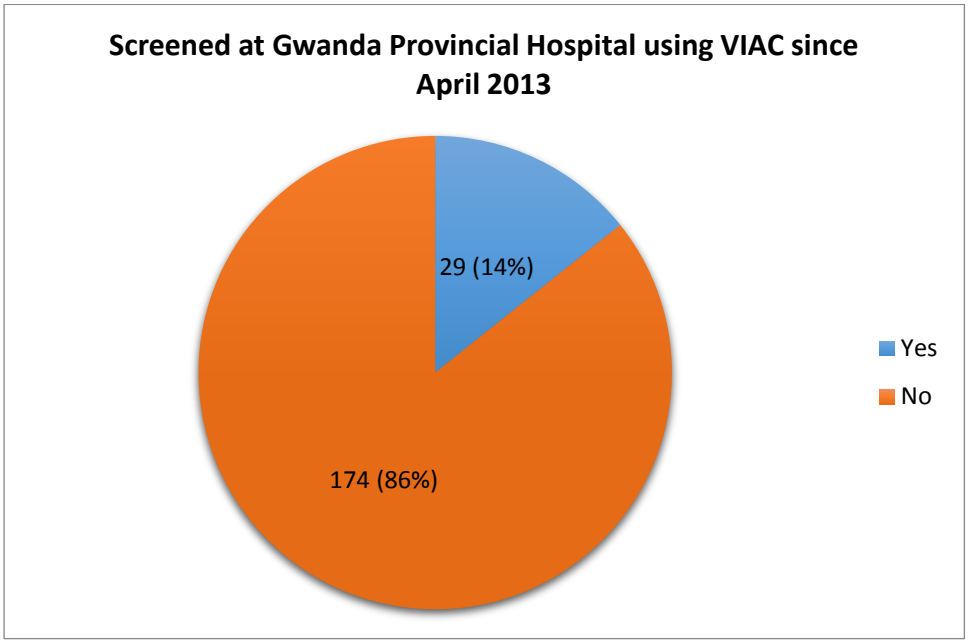


Figure 9 Percentage distribution of participants by VIAC screening status at Gwanda Provincial Hospital since April 2013 (n = 203).

3.2.2.5 VIAC uptake status by socio-demographic characteristics

Table 5 gives information on the participants VIAC screening status in relation to their socio-demographic characteristics.

The highest screening rates were found among younger women aged between 30 and 49 years 16 (35.4%) and the least among the older women aged 50 years and above. Screening was highest among the widowed 5 (26.3%) and the never married 7 (23.3%). Women with no children 4 (33.3%) had the highest screening rates and the least screening was observed among women who had five or more children.

With regards education, screening was highest among those women who had a tertiary education 3(20%) and lowest among the least educated of primary school or less 6 (11.1%).

Women residing in urban areas 16 (23.2%) had higher screening rates compared to those residing in rural areas although the least screening was observed among women residing in mining compounds 1 (3.4%).

With regards to employment status, self-employed women had the highest screening rates 11 (33.3%), while the least screening rates were observed among the unemployed 4 (5.3%).

Women with the highest monthly household income of above USD 1000 had the highest screening rates.

Table 5: VIAC screening status of participants by socio-demographic characteristics (*n* = 203)				
Variable	VIAC screening in Gwanda since April 2013		x^2 value	P value
	Yes n (%)	**No** n (%)		
Age category (years)			6.0560	0.301
Below 20	2 (12.5)	14(87.5)		
20–29	9(13.6)	57(86.4)		
30–39	11(17.5)	52(82.5)		
40–49	5(17.9)	23(82.1)		
50–59	1(5.6)	17(94.4)		
60+	1(8.3)	11(91.7)		
Marital status			**7.3704**	**0.05**
Never married	**7(**23.3)	23(76.7)		
Married/living with partner	16(11.8)	120(88.2)		
Divorced / separated	1(5.6)	17(94.4)		
Widowed	5(26.3)	14(73.7)		
Number of children			1.6912	0.639
0	4(33.3)	8(66.7)		
1–2	12(14.3)	72(85.7)		
3–4	9(13.8)	56(86.2)		
5+	4(9.5)	38(90.5)		
Educational attainment			0.6552	0.121
Primary school or less	6(11.1)	48(88.9)		
Secondary / High school	20(14.9)	114(85.1)		
Tertiary / college	3(20)	12(80)		
Residential area			1.8927	0.388
Rural	12(11.4)	93(88.6)		
Urban	16(23.2)	53(76.8)		
Mine	1(3.4)	28(96.6)		
Employment status			3.2999	0.348
Full time housewife	10(26.3)	28(73.7)		
Unemployed	4(5.3)	71(94.7)		
Self employed	11(33.3)	22(66.7)		
Formally employed	4(7)	53(93)		
Monthly Household Income (US$)			**10.7982**	**0.013**
Less than 100	10(12.5)	70(87.5)		
100–500	17(16.2)	88(83.8)		
501–1000	1(7.7)	12(92.3)		
Above 1000	1(20)	4(80)		
No of lifetime sexual partners			2.4598	0.292
1	9(13.6)	57(86.4)		
2-4	16(15.7)	86(84.3)		
More than 4	4(11.4)	31(88.6)		
Knowledge levels			3.8309	0.147
Inadequate	10(14.3)	60(85.7)		
Fair	8(34.8)	15(65.2)		
Good	2(11.1)	16(88.9)		
Ever heard of cervical cancer			3.3093	0.06
Yes	29(22.8)	98(77.2)		
No	0	76 (100)		

3.2.2.6 Factors associated with VIAC uptake

Uptake of VIAC screening was cross tabulated with some sociodemographic and knowledge variables to determine if there were any associations.

As Table 5 shows, there was a statistically significant association between monthly household income and uptake of VIAC (x^2 = 10.7982, P = 0.013) with the highest earners having the highest screening rates. A significant association was also observed between uptake of VIAC and marital status (x^2 = 7.3704, P = 0.05) where the widowed and never married had higher likelihood of getting screened.

Although not statistically significant, the study noted that screening rates were highest among participants who had no children and decreased as the number of children increased ((x^2 = 1.6912, P = 0.639). Also observed although not statistically significant was a pattern where screening rates increased as the level of education increased (x^2 = 0.6552, *P* = 0.121).

Women who had heard about cervical cancer were more likely to be screened compared to those who had never heard of the disease ($x^{2\ =}$ 3.3093, P = 0.06).

3.2.3 Participants' knowledge of cervical cancer and VIAC screening

This subsection addresses participants' awareness of cervical cancer and the VIAC screening programme, general knowledge of cervical cancer, and the benefits of VIAC screening.

3.2.3.1 Awareness about cervical cancer

Participants were asked if they had ever heard about cervical cancer. The majority of them 127 (62.6%) had heard about the disease as Figure 10 shows. The 76 (37.4%) who had never heard about cervical cancer were excluded from further knowledge questions as they were not applicable to them.

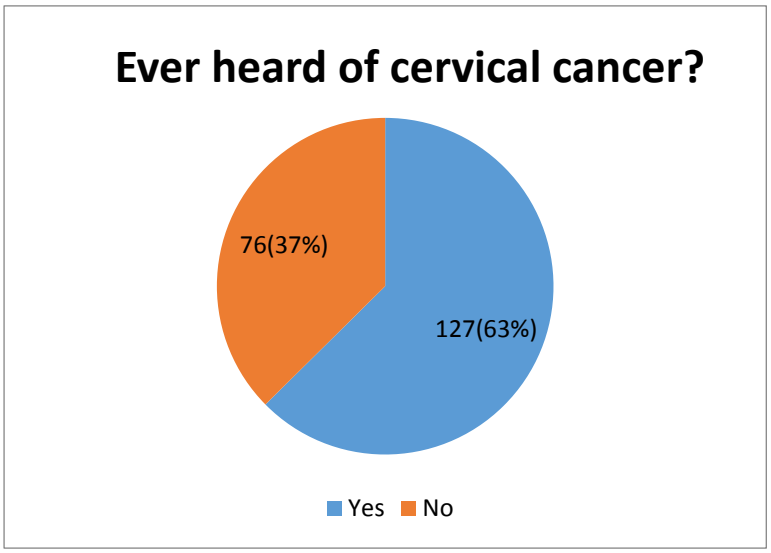


Figure 10: Percentage distribution of participants by cervical cancer awareness (n =203)

3.2.3.2 Knowledge of cervical cancer

The knowledge levels of participants were rated based on the knowledge construct. Participants' knowledge levels were generally limited 70 (63.1%) as reflected in Table 6.

Table 6 : Participants' distribution by cervical cancer knowledge levels

	Frequency	%
Limited knowledge	70	63.1
Fair knowledge	23	20.7
Good knowledge	18	16.2
Total	111	100

There was a significant association between knowledge levels and residence (x^2 = 9.0624, P = 0.06). Women residing in rural areas were the most limited in knowledge. A significant association was also found between knowledge and parity (x^2 = 14.7440, P = 0.02). Women with five children and above were more likely to have limited knowledge compared to women with fewer children. Figure 5 gives further illustration on the variability of the knowledge levels and how they were skewed towards the lower end despite the fact that most women had heard about cervical cancer.

3.2.3.3 Awareness of the VIAC screening programme

Questions were asked pertaining to the participants' awareness of VIAC screening services and the benefits of screening. The majority (74.4%) reported having heard about the VIAC screening programme (Figure 11).

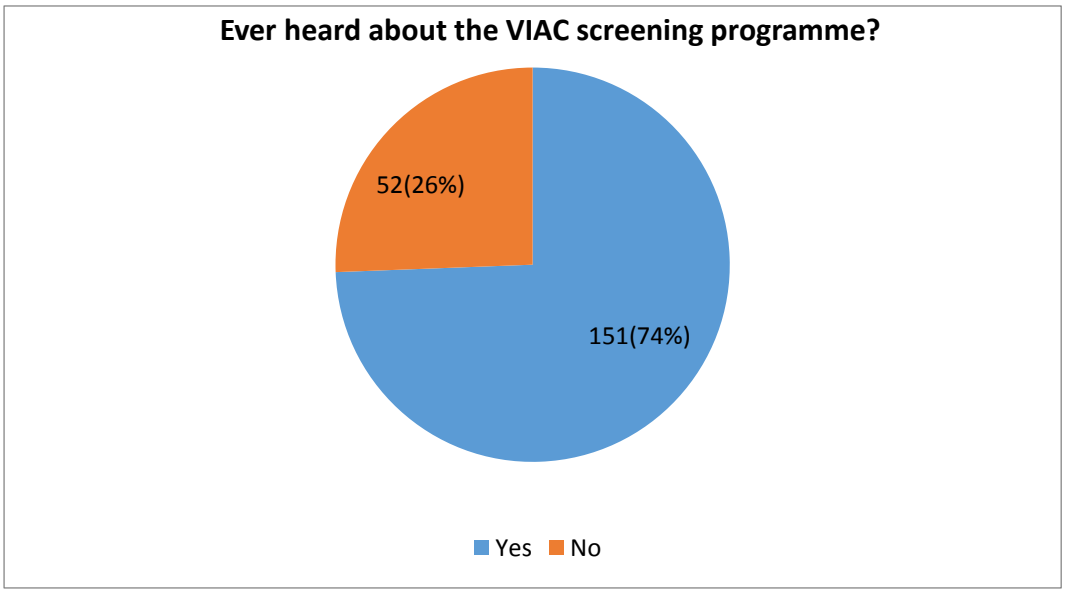


Figure 11: Percentage distribution of participants by awareness of VIAC programme (n = 203)

3.2.3.4 Source of information about VIAC

Figure 12 shows the participants' responses on their sources of information about the VIAC programme. Friends and relatives 47 (31.1%) emerged as the most popular source.

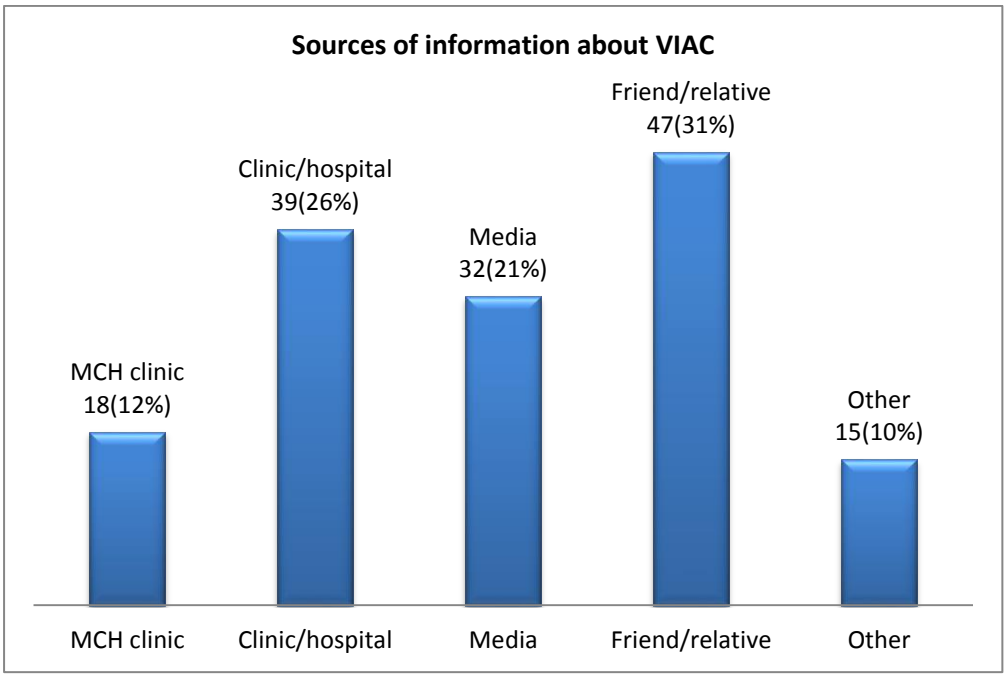


Figure 12: Percentage distribution of participants by source of VIAC information (n = 151)

Other sources of information not specified (*n* = 15) were; Community Health Workers (CHWs) 9 (60%), Church 2 (13.3%), Posters 2 (13.3%), Radio programme 1(6.7%), and School programme 1(6.7%).

3.2.3.5 Association between awareness of VIAC programme and socio-demographic characteristics

When awareness of the VIAC screening programme was cross-tabulated with some socio-demographic and satisfaction variables, there was a significant association between 'ever heard of VIAC screening' with residential area (x^2 = 7.9081, P = 0.019), employment status (x^2 = 7.7647, P = 0.051), estimated distance from primary health facility to Gwanda Provincial Hospital (x^2 = 7.4955, P = 0.058) and satisfaction with hospital services (x^2 = 6.081, P = 0.014). Participants residing in urban and mining areas recorded equally higher responses on ever hearing about the screening programme compared to rural participants. The further the distance from the Provincial Hospital was associated with

lower chances of ever hearing about VIAC. Participants who were self-employed and those who were happy with the services they received at the institution reported higher responses to ever hearing about the programme.

Associations between ever heard about the VIAC programme and socio-demographic characteristics are summarised in Table 7.

Table 7: Association between some variables and awareness of VIAC programme (n= 203)				
Variables	**Ever heard of VIAC programme *n* (%)**		**x^2 value**	***P*-value**
	Yes	No		
Age category				
Below 20	9 (56.3)	7 (43.7)	3.2082	0.668
20–29	43 (65.2)	23 (34.8)		
30–39	42 (66.7)	21 (33.3)		
40-49	17 (60.7)	11 (39.3)		
50–59	11 (61.1)	7 (38.9)		
60+	5 (41.7)	7 (58.3)		
Marital status				
Never married	17 (65.7)	13 (43.3)	0.6038	0.896
Married/ living with partner	86 (63.2)	50 (36.8)		
Divorced/separated	12 (66.7)	6 (33.3)		
Widowed	12 (63.2)	7 (36.8)		
Number of children				
0	8 (66.7)	4 (33.3)	2.3666	0.500
1–2	55 (65.5)	29 (34.5)		
3–4	42 (64.6)	23 (35.4)		
5+	22 (52.4)	20 (47.6)		
Educational attainment				
Primary or less	30 (55.6)	24 (44.4)	2.0244	0.363
Secondary/high school	86 (64.2)	48 (35.8)		
Tertiary/college	11 (73.3)	4 (26.7)		
Residential area				
Rural	56 (53.3)	49 (46.7)	7.9081	**0.019**
Urban	21 (72.4)	19 (27.5)		
Mine	21 (72.4)	8 (27.6)		
Number lifetime of sexual partners				
1	38 (57.6)	28 (42.4)	1.0492	0.592
2–4	66 (64.7)	36 (35.3)		
4+	23 (65.7)	12 (34.3)		
Age at first sexual intercourse				
Younger than 15	7 (53.9)	6 (46.2)	1.3308	0.722
15–19	77 (64.7)	42 (35.3)		
20–24	38 (62.3)	23 (37.7)		
25+	5 (50)	5 (50)		
Employment status				
Full-time housewife	44 (58.7)	31 (41.3)	7.7647	**0.051**
Unemployed	30 (52.6)	27 (47.4)		
Self employed	26 (78.8)	7 (21.2)		
Formally employed	27 (71.1)	11 (29)		
Financial situation				
Dependent on spouse	59 (60.2)	39 (39.8)	4.2590	0.119
Independent	56 (70)	24 (30)		
Other	11 (47.8)	12 (52.2)		
Monthly household income				
Less than 100	44 (55)	36 (45)	5.7063	0.127
100–500	70 (66.7)	35 (33.3)		
501–1000	8 (61.5)	5 (38.5)		
Above 1000	5 (100)	0		
Distance travelled to Gwanda				
Less than 5km	43 (69.4)	19 (30.6)	7.4955	**0.058**
5–10km	10 (71.4)	4 (28.6)		
11–20km	24 (68.6)	11 (31.4)		
More than 20km	48 (52.2)	44 (47.8)		
Satisfaction with hospital services				
Yes	118(65.6)	62(34.4)	6.081	**0.014**
No	9 (39.1)	14(60.9)		

3.2.3.6 Association between ever heard of the VIAC programme and ever heard of cervical cancer

Table 8 shows the strong association between having ever heard about the VIAC programme and having ever heard of cervical cancer ($x^2 = 20.2123$, $P = < 0.001$).

Table 8: Association between awareness of the VIAC programme and awareness of cervical cancer

Ever heard about the VIAC programme	Ever heard of cervical cancer		Total	x^2 value	*P*-value
	No	Yes			
No	33 (63.5%)	19 (36.5%)	**52 (100%)**	20.2123	**< 0.001**
Yes	43 (28.5%)	108 (71.5%)	**151 (100%)**		
Total	**76 (37.4%)**	**127 (62.6%)**	**203 (100%)**		

3.2.4 Factors influencing the uptake of VIAC screening

3.2.4.1 Satisfaction with general hospital services

All the 203 participants were asked if they were satisfied with the health services they received at Gwanda Provincial Hospital. The majority 180 (88.7%) were happy with the services and when asked to qualify their responses, they highlighted that the hospital staff was friendly 104(60.1%) and that quality services were offered 38(22%). Not all the participants who indicated they were happy with the hospital services gave reasons for their satisfaction. A summary of responses to reasons for satisfaction with health services is given in Table 9.

Table 9 : Reasons for satisfaction with health services at Gwanda Provincial Hospital

Reason	Frequency	%
Health workers are professional and friendly	104	60.1
Quality services are offered	38	22
Health Information is given on different health issues	14	8.1
Medicines are usually available	13	7.5
There are short waiting times	4	2.3
Total responses	**173**	**100**

Table 10 summarises the reasons given by the 23 (11.3%) participants who were dissatisfied with the health services they received. The commonest reasons highlighted were; negative staff attitudes 13 (38.2%), medicines shortages 7 (20.6%) and long waiting periods before being attended to 5 (14.7%).

Table 10: Reasons for dissatisfaction with health service delivery

Reason	Frequency	%
Some nurses are rude and ill treat patients if they speak a language different from their own	13	38.2
Medicines are not always available and are charged. This disadvantages people who cannot afford to purchase them	7	20.6
Staff shortages which lead to long waiting times	5	14.7
Staff appear to be ignorant on how to manage patients at times	4	11.9
Although this is beyond the institution's control, there is limited electricity supply resulting in patients not getting some services	2	5.9
Ablution facilities are always dirty	1	2.9
Education on important topics like cervical cancer is not given	1	2.9
Staff turn patients back untreated if they are not referred	1	2.9
Total responses	**34**	**100**

3.2.4.2 Satisfaction with VIAC clinic services

The 29 (14.3%) participants who had received VIAC screening specifically at Gwanda Provincial Hospital were asked if they were satisfied with the services provided at the VIAC clinic. All were happy with the services and cited; quality of services provided 14 (39.4%), kind and respectful staff 10 (30.3%), and adequate information giving on cervical cancer and screening procedures 10 (30.3%).

3.2.4.3 Perceived barriers to accessing VIAC services

All 203 participants were asked to indicate from the given responses what they perceived as barriers to accessing VIAC screening at Gwanda Provincial Hospital. The most common

responses, as summarised in Table 11, were: lack of adequate information on VIAC 157(37%), inaccessibility of screening services due to distance 61(14.4%) and fear of a positive result 56(13.2%).

Table 11: Perceived barriers to accessing VIAC services

Perceived barrier	Frequency	%
Lack of adequate information on VIAC	157	37
Difficulty in accessing VIAC services, not available at local facility (no money to travel to Gwanda)	61	14.4
Fear of knowing one has cancer	56	13.2
Reluctance to go for screening in the absence of illness	41	9.7
No time to come to clinic , too busy	22	5.1
Prerequisite HIV test Spouses not agreeable	22	5.1
Fear that the procedure is painful	16	3.8
Negative attitudes of service providers	15	3.5
Health workers not giving advice and encouragement to access screening	10	2.4
Negative attitudes of service providers	9	2.2
No perceived risk for cervical cancer	8	1.9
The test is embarrassing	7	1.7
Total responses	**424**	**100**

3.2.5 Participants' suggestions for improving the uptake of VIAC screening

Participants were asked to suggest ways which could improve the uptake of VIAC services at the institution. The responses obtained are summarised in Table 12. A call for health education on VIAC screening in all hospital departments and primary level facilities got 153 (25.7%) responses. Other suggestions were; use of Community Health Workers (CHWs) and peer educators for education of women on VIAC 91 (15.3%), decentralising VIAC screening to primary level facilities 83 (13.9%) and involving men in VIAC awareness programmes 41 (6.9%).

Table 12: Recommendations for improving the uptake of VIAC screening		
Recommendation	**Frequency**	**%**
Give health information on VIAC in departments and primary health facilities even if they do not offer VIAC services	153	25.7
Use CHWs and Peer educators to educate women on the VIAC programme	91	15.3
Decentralise VIAC services to primary health facilities or provide mobile clinics for VIAC screening in rural areas	83	13.9
Increase awareness on screening by addressing women at meetings, colleges and workplaces	82	13.8
Use pamphlets and posters to disseminate information on VIAC	73	12.2
Involve men in education about VIAC	41	6.9
Make VIAC screening a routine post-natal procedure	22	3.7
Make use of community leaders to create awareness on VIAC	17	2.8
Offer free treatment for a VIAC positive result	14	2.3
Extend VIAC clinic operational times to weekends and public holidays to accommodate working mothers	13	2.2
Produce IEC materials in local languages not only in English	7	1.2
Total responses	**596**	**100**

3.3 Conclusion

This chapter outlined the findings of the study including barriers to screening and participants' suggestions for improving the uptake of VIAC services at Gwanda Provincial Hospital. The findings revealed that the uptake of VIAC screening at the institution was low. General knowledge on VIAC screening was also low among women. Uptake of the VIAC programme was strongly associated with marital status and monthly household income .Women with prior knowledge of cervical cancer also had higher chances of screening compared to those who had never heard of cervical cancer. Barriers to screening were mostly related to lack of knowledge on screening and inaccessibility of VIAC services.

The next chapter discusses the findings of the study.

CHAPTER 4: DISCUSSION

4.1 Introduction

The aim of this study was to determine the uptake of VIAC screening among women who attend health services at Gwanda Provincial Hospital in Zimbabwe and the factors which influence such uptake. Uptake of the VIAC programme and knowledge levels on cervical cancer and screening were found to be low. This chapter is a discussion of the findings of the study in relation to the objectives informed by the conceptual framework.

4.2 Socio-demographic factors

The study comprised of women who were mainly in the 20–49 year age group, married, and predominantly with 1-2 children. Most were unemployed, resided in rural areas, and had attained a secondary or high school level of education.

The finding of this study on age is consistent with similar studies conducted earlier in Zimbabwe and in Jamaica. The mentioned studies revealed that younger married women in the reproductive age group were more likely to utilise reproductive health services compared to older women (5,34).In this study, most participants were from the rural areas. This finding is contrary to a hospital based study conducted in India which suggested that urban based women were more likely to utilise health services because of their proximity to health centres (36). The explanation for the higher proportion of participants being from the rural areas and unemployed in this study is that Gwanda Provincial Hospital serves as a referral center to a predominantly rural population (32).

4.3 Uptake of VIAC screening

The major finding from this study was that only 14 % of the participants had ever accessed VIAC screening since the launch of the programme 18 months prior to the study. This

finding is not different from those of other researchers in other developing countries which have also reported low screening rates. Cervical cancer screening rates of 10.2% have been reported in Nigeria (2), 13% in Uganda (17),11% in Jamaica (34), 12% in India(36), and 4.3% and 9% respectively in earlier community based studies conducted in Zimbabwe (5,11). Of note in the current study was that; better educated younger women with higher levels of income and residing in urban areas had accessed VIAC screening compared to the less educated, low earners and non-urban dwellers . Furthermore, this study revealed that knowledge and awareness of cervical cancer and the VIAC programme had a strong impact on VIAC uptake. Concerning residential area, findings of the present study are supported by several studies from sub-Saharan Africa such as Uganda, Botswana and Nigeria which all confirm that higher screening rates are prevalent among urban women compared to the rural (7,36,44). The same studies have linked this to the better access urban women have to health care services.

This study found that women aged 50 years and above were less likely to have ever had VIAC screening. A previous study confirms that in Zimbabwe, formally educated young women of childbearing age typically attend and have better access to screening services (5). This is attributed to the fact that younger women attend reproductive health services and prior to the VIA era, pap smear tests were done routinely on clients who attended family planning services (5). The assumption in this study is that young women inquire about cervical cancer screening when they attend Family Planning services and are appropriately referred. The underuse of screening among the older age groups poses a public health problem as they are more likely to develop cervical cancer compared to younger women aged less than 30 years (43).

In this study, the highest screening uptake was found among self-employed women when compared to the formally employed and unemployed. Although other studies have not directly referred to self-employment which is more contextual to the Zimbabwe setting, inconvenient operating hours have been cited as a major deterrent to accessing screening services among employed women (6). Unemployed women on the other hand are constrained from accessing VIAC services by lack of money. Women in India expressed that men had control over family finances. This made it difficult for them to request for money to undergo tests which their spouses did not understand (36). Studies conducted in Ghana and Jamaica both revealed the unaffordable spending on transport if one lived far from the hospital which provided screening services(34,45)

Compared to married women, this study found the never married and widowed women to have a higher likelihood for VIAC screening. Marital status has been found to be a significant predictor of screening uptake in similar studies. On one hand, support from spouses has been found to be positively associated with cervical cancer screening as was proved in a study conducted in Uganda (45).The same finding was reported by an NGO offering reproductive health services in the capital city of Zimbabwe (46). On the other hand, spouses have been found to hinder cervical cancer screening depending on what they believe or know about screening. This finding was suggested in a study conducted in India (36). In another study carried out in Zimbabwe, women viewed men as constraining factors because they did not understand the importance of screening (11). The present study additionally identified that men discouraged their partners from VIAC screening because knowledge of HIV status was a prerequisite to screening. Women highlighted that men perceived their partners' HIV results to be an indication of their own HIV status and would rather not know. This finding could be linked to the low screening rates among married

women observed in this study. Participants in this study also reported spousal refusal as one of the barriers to the uptake of VIAC. Higher VIAC screening rates among the single and widowed women shown in this study could thus be attributed to the independence this group has on the decisions they take about VIAC screening.

An inverse relationship between parity and uptake of VIAC was observed in this study where screening rates decreased as the number of children increased. The explanation for the low screening rate among high-parity women could be the opportunity cost of foregoing domestic activities which is prevalent among this group as shown in other studies (41). This finding is worrying since multiparity has been found to be associated with an increased risk of cervical cancer (43). The finding is however in conflict with that of a hospital based study conducted in India which revealed that women with more children were more likely to utilise screening services because of their increased awareness of reproductive health programmes (36).

Similar community-based studies conducted in two rural districts of Zimbabwe revealed cervical cancer screening rates of 4.2%, 4.3% and 7% respectively (5,11). The relative increase in screening uptake in this study could be related to the fact that this study was hospital based. Chances of women getting information about the programme and making a decision to be screened were thus greater.

4.4 Knowledge and awareness of cervical cancer and the VIAC programme

An important finding of this study concerning knowledge levels was that; although most women (63%) had heard about cervical cancer, only 16.2% had adequate knowledge on the subject. Poor knowledge on cervical cancer among women has also been reported in other studies from developing countries such as Botswana, Ghana and Tanzania (38,39,41). These studies have proved that inadequate knowledge of cervical cancer can be a barrier to

screening. The participants' consistent citation of lack of adequate knowledge as a reason for not attending VIAC screening in this study demonstrates their lack of awareness of their personal risk of the disease. This is despite the fact that 65.7% of them reported having had more than four lifetime sexual partners. Inadequate knowledge on screening has been linked to poor dissemination of information by health providers (2,35,41).

Of concern in this study was that relatives and friends seem to be the major sources of information on VIAC when compared to health workers. This finding is consistent with the results of a study conducted in Botswana which also identified that health workers were not informing women about cervical cancer and screening tests (38). Women obtained knowledge on cervical cancer and screening from discussions with their peers (38). In yet another study conducted in Nigeria, the media ahead of health workers was the primary source of information (2). A study conducted in Uganda among medical workers also revealed that the majority of health workers did not ask patients if they had been screened for cervical cancer ,or ever recommended screening to patients (17). This finding highlights the need for improved information dissemination by health workers with the goal of improving knowledge, and subsequently the uptake of VIAC screening. Contrary to findings of studies referred to, a study carried out in Nigeria found health workers to be the commonest source of information on screening especially in urban areas (7).

There was a clear relationship between residential area and knowledge, concurring with findings from international studies that women in rural areas are missed with essential health information (27,40). This could be related to the association between distance from the Provincial Hospital and ever hearing about the VIAC programme observed in this study.

The level of awareness about the VIAC programme among women in this study was 74%. This is much higher than the 19% reported in an earlier study conducted in Zimbabwe (5).The rate is also higher than that of other studies conducted elsewhere in other developing countries where awareness rates on screening programmes ranged from 15 – 62% (2,7,36,41). The high level of awareness observed in this study is not unexpected. The VIAC programme is currently one of the highly promoted health issues in the country with parliamentarians and celebrities taking a lead in spreading awareness, and motivating other women to do the same (46).

The formally employed and full time housewives in the present study had the least likelihood of ever hearing about the VIAC programme .This could be an indication that more innovative strategies are required to reach this group with screening information.

4.5 Factors influencing the uptake of VIAC

The key factors identified as influencing the uptake of VIAC in this study are closely linked to the socio-demographic characteristics of participants and perceived barriers to screening.

The financial situation of the household was a very significant factor with increased chances of screening noted among women with higher monthly household income. Although VIAC screening is offered for free at the health institution, there are other expenses associated with the test such as travel costs. This has an influence on motivation for screening. Studies conducted in Zimbabwe (5) and Jamaica (43) concur on the effect of financial status as a predictor to accessing screening. These findings are consistent with a study carried out among Hispanic women in the United States (48).

The major barriers to VIAC screening identified in this study were; inadequate knowledge on VIAC screening, inaccessibility of VIAC services since they are currently centralised to the Provincial Hospital, fear of finding out one has cervical cancer, not seeing the need for

screening in the absence of illness, lack of time to go for the test, fear that the procedure is painful, health workers not giving advice on screening, and negative staff attitudes. Similar sentiments were highlighted by participants who had not had cervical cancer screening. In addition, some women indicated that they had only recently heard about the programme , were not aware of where the services were offered, were formally employed and services were offered only during weekdays when they were at work, and one participant did not see the need to screen as she was no longer sexually active.

Perception of good health as a barrier to VIAC screening is consistent with findings of other studies. In Nigeria, women believed that only those with symptoms suggestive of cervical cancer should have the screening test (18).Studies conducted in Nigeria and Uganda identified that one of the commonest reasons for not screening was that women did not have any physical complaints and believed themselves as not being at risk (7,17). Other studies have also found significant associations between a low perceived risk of cervical cancer and limited uptake of screening (34).In a study conducted in Botswana (1), women also expressed that it was embarrassing to be screened, their partners were refusing, clinic times were inconvenient ,they lacked information on screening, and did not know where to go for screening.

All these findings are not new, as similar sentiments have been echoed in previous studies conducted in developing countries (7,8,34,45). There is a need to address the health system barriers in order to increase uptake of VIAC in Gwanda Provincial Hospital. Misconceptions and fears about screening also need to be dispelled.

Another important finding in this study was that women were generally satisfied with the services they received at the institution. Women revealed that health workers were professional and provided high quality services. The few women who were unhappy with

the health services cited negative staff attitudes, long waiting times and shortage of medicines at the institution. The study also revealed that satisfaction with hospital services was positively correlated to receiving information on the VIAC programme. Research conducted in Peru and Bolivia shows that poor quality services can result in dissatisfaction, and dissatisfied women can discourage their neighbours and friends from participating in screening (37) . Improvements in service delivery can therefore result in improved client satisfaction and subsequent increase in VIAC uptake.

4.6 Conclusion

This chapter discussed the findings of the study and related them to the objectives of the study and conceptual framework developed from previously conducted studies. A myriad of factors at personal and health system level hinder the uptake of VIAC screening at Gwanda Provincial Hospital. Lack of knowledge and understanding of cervical cancer and the VIAC programme has resulted in a low uptake of the programme. The conclusions reached and recommendations for addressing the findings are presented in the next chapter.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The conclusion of this study answers to the three objectives which were: to determine the uptake of VIAC screening among women attending health services at Gwanda Provincial Hospital in November 2014, to assess their knowledge and awareness on cervical cancer and VIAC screening, and to determine the factors which influence the uptake of VIAC screening.

5.2 Conclusion

This study provided information on the uptake of VIAC screening and the factors that influence screening uptake in a population not previously studied. The study concluded that women attending Gwanda Provincial Hospital have inadequate knowledge on the VIAC programme and the VIAC screening uptake is low. It should however be acknowledged that the programme is only into its second year of implementation. There are some sub-groups among which VIAC screening can be increased within the target population. Of special note are women in the rural areas and those with a low socio-economic status. This is indicative of an unmet need for VIAC screening information and needs to be addressed.

The major barriers to the uptake of VIAC are health service factors related to accessibility of the service. Personal and socio-demographic factors are to a large extent linked to problems related to health service delivery. Included is lack of adequate information on VIAC to enable women and their spouses / male partners to make informed decisions on screening.

The findings of this study should contribute towards formulation of strategies at institutional level to increase knowledge on VIAC screening for improved uptake of the programme.

5.3 Recommendations

Based on the findings, the study suggests some recommendations for increasing the uptake of VIAC at Gwanda Provincial Hospital. The recommendations have also incorporated suggestions given by the study participants. The recommendations take into account that awareness programmes require to be structured in a way that will achieve the goal of reaching all eligible women with information on VIAC.

5.3.1 Improving knowledge levels on cervical cancer and VIAC screening

A high participation in VIAC screening can only be achieved if eligible women are made aware of the programme and have adequate knowledge about the disease, benefits of screening, and the screening procedures. Gwanda Provincial Hospital could consider the following which this study recommends:

1. Protocols should be established to facilitate prompting of all women in the 30-50 year age group to attend VIAC screening during any consultation for whatever service the women would be attending. This could take the form of routinely giving health education talks on VIAC screening every morning to all women regardless of the type of service the women are seeking while still in the waiting area. This service which is already offered to women in the VIAC clinic could be extended to all departments so that all high risk women have access to VIAC screening information.
2. Developing and distributing brochures in the local languages to all women attending health services which give information on where VIAC services are accessed, how the procedure is performed, possible results and their meaning and the procedures

following the test. Through liaison with the Ministry of Education, the brochures could also be distributed to families through schools using school children.

3. Placing posters at strategic places such as shopping areas, bus and taxi ranks where people can easily read them.
4. Giving information on VIAC screening where people gather such as at community meetings and churches in collaboration with relevant community leaders. In the Zimbabwean setting, funerals are also used as a platform to make important community announcements. The same fora could be used to advise women about the VIAC programme and where it can be accessed.
5. VIAC screening campaigns could be held on a regular basis to keep people reminded about screening. Existing events such as World Health Day and World AIDS day commemorations which are held in all health facilities could incorporate messages on VIAC screening through songs , poems and drama by school children and entertainments groups. In Gwanda town, a VIAC team could go out once a month and advise the community about screening using loud speakers which normally draw the attention of the public.
6. Already existing Community Health Workers and Peer Educators could be trained or inducted on VIAC, and used to give information on an interpersonal, family and community level.
7. Women who have had VIAC screening should be encouraged to become local advocates for the programme and talk about it to friends, neighbours and their families.
8. Workshops could be conducted for men to enhance their support for cervical cancer prevention. Male education would allow them to better understand VIAC screening so that they can provide support to their partners.

The multiple communication strategies should address misconceptions and fears about VIAC screening activities. This would help eliminate some barriers to screening associated with lack of knowledge.

5.3.2 Increasing the uptake of VIAC screening

Increasing access to screening could result in increased uptake of VIAC and this could be achieved through:

1. Scheduling VIAC services according to times when women are more likely to attend. Both rural and urban women may be finding it difficult to attend screening services during working hours because of opportunity costs of foregoing other household duties or due to their inflexible working hours. The researcher suggests that the institution considers opening the VIAC clinic around women's time constraints which includes weekends and public holidays when more women are likely to attend.

2. Training more nurses and doctors on VIAC procedures to increase coverage to weekends and public holidays. This would complement the services of the currently trained two nurses and one doctor, and provide skills to more health workers for promoting VIAC screening among all eligible women consulted.

3. It is crucial that VIAC services are taken nearer to communities in order to improve the uptake of VIAC. Mobile screening services are therefore recommended to strategic rural health facilities to increase coverage of screening. This strategy should be planned in alignment with the institution's resources. Decentralising screening services to lower health levels through VIAC mobile clinics has been successfully implemented in other low resource settings and has been proved to be effective (37,59). The same strategy could be considered in Gwanda.

4. The VIAC programme could be rolled out to the two Mission Hospital within the district in order to increase access of the service for rural communities.

5.3.3 Addressing factors which influence uptake of VIAC screening

Gwanda Provincial Hospital should use information about the barriers women face in seeking VIAC services to guide improvement in the currently available services. Continuous quality improvement processes need to be strengthened for assessment of privacy and clarity of VIAC screening information received. Client feedback processes are important for enhancement of client satisfaction (37) .This could result in increased uptake of VIAC screening.

Above all, the study recommends that Gwanda Provincial Hospital establishes a target for VIAC screening and base its strategies towards achieving the goal. This would also aid in monitoring and evaluation of the programme and replanning of new strategies for increasing the uptake of VIAC. Lessons could be drawn from Thailand which set an 80% coverage for a period of five years but were able to achieve a 60% coverage in two years in its focal district (37) . This is evidence that with well-focused coverage strategies, a high uptake of VIAC can be achieved in recognition of the fact that the programme in Gwanda has reached almost two years of implementation.

5.4 Limitations of the study

The results of this study should be interpreted under the context of its limitations. Firstly, convenience sampling was used and this could have resulted in a non-representative sample. Secondly, the use of a researcher administered questionnaire could have introduced an element of bias associated with social desirability. Thirdly, some information on cervical cancer and VIAC screening was given to those participants who did not have knowledge on the subjects. This could have resulted in participant contamination and increased the 'yes'

responses to the questions; ‘have you ever heard about cervical cancer’ and have you ever heard about the VIAC programme’. This could have favourably biased the results. Lastly, a multivariate analysis could have added value to the results of the study but could not be performed due to the small sample size.

REFERENCES

1. Ibekwe C. Factors influencing cervical cancer screening uptake among women attending Mahalapye District Hospital in Botswana - Use of the Health Belief Model [Internet]. 2009. Available from: http://ul.netd.ac.za/handle/10386/227

2. Hyacinth HI, Adekeye OA, Ibeh JN, Osoba T. Cervical Cancer and Pap Smear Awareness and Utilization of Pap Smear Test among Federal Civil Servants in North Central Nigeria. PLoS One. 2012;7(10):1–8.

3. Ackerson K, Pohl J, Low LK. Personal Influencing Factors Associated With Pap Smear Testing and Cervical Cancer. Policy, Polit Nurs Pract. 2008;9(1):50–60.

4. Weller DP, Campbell C. Uptake in cancer screening programmes: a priority in cancer control. Br J Cancer. Nature Publishing Group; 2009 Dec 3;101 Suppl(S2):S55–9.

5. Mupepi S, Sampselle CM, Johnson TRB. Knowledge , Attitudes , and Demographic Factors Influencing. J Women's Heal. 2011;20(6).

6. Gannon M, Dowling M. Increasing the uptake of cervical cancer screening programmes. Br J Nurs. 2008;17(20):1280–4.

7. Nwankwo,K,C, Aniebue, U,U, Aguwa,E,N, Anarado,A,N and Agunwah E. Knowledge attitudes and practices of cervical cancer screening among urban and rural Nigerian women : a call for education and mass screening. J Cancer Care. 2011;20:362–7.

8. Urasa M, Darj E. Knowledge of cervical cancer and screening practices of nurses at a regional hospital in Tanzania. Afr Health Sci. 2011 Mar;11(1):48–57.

9. Yang BH, Bray FI, Parkin DM, Sellors JW, Zhang Z-F. Cervical cancer as a priority for prevention in different world regions: an evaluation using years of life lost. Int J Cancer. 2004 Apr 10;109(3):418–24.

10. Chokunonga E, Borok MZ, Chirenje ZM, Nyakabau AM. Cancer Incidence in Harare: Triennal Report : 2010 - 2012. [Internet]. 2013. Available from: http://afcrn.org/attachments/article/83/HARARE TRIENNAL REPORT 2010-12.pdf

11. Mangoma JF, Chirenje MZ, Chimbari MJ, Chandiwana SK. An assessment of rural women's knowledge, constraints and perceptions on cervical cancer screening: the

case of two districts in Zimbabwe. Afr J Reprod Health. 2006;10(1):91–103.

12. Awodele O, Adeyomoye A, Awodele DF, Kwashi V, Awodele IO, Dolapo DC. A study on cervical cancer screening amongst nurses in Lagos University Teaching Hospital, Lagos, Nigeria. J Cancer Educ. 2011 Sep;26(3):497–504.

13. Kawonga M, Fonn S. Achieving effective cervical screening coverage in South Africa through human resources and health systems development. Reprod Health Matters. 2008 Nov;16(32):32–40.

14. World Health Organisation. Cervical cancer prevention in low resource settings [Internet]. 2002. Available from: http://www.globalhealthlearning.org

15. Zimbabwe AIDS Care Foundation Activity Report [Internet]. 2012. Available from: http://www.newlandsclinic.org.zw/fileadmin/user_upload/redakteure/Jahresberichte/ZACF_Annual_Report_2012_final.pdf

16. Ministry of Health and Child Welfare: Zimbabwe. The National Cancer Prevention and Control Strategy for Zimbabwe : 2013 - 2017. 2013.

17. Mutyaba T, Mmiro FA, Weiderpass E. Knowledge , attitudes and practices on cervical cancer screening among the medical workers of Mulago Hospital , Uganda. BMC Med Educ. 2006;4:4–7.

18. Oche MO, Kaoje AU, Gana G, Ango JT. Cancer of the cervix and cervical screening : Current knowledge , attitude and practices of female health workers in Sokoto , Nigeria. Int J Med Med Sci. 2013;5(4l):184–90.

19. Mukakalisa I. Cervical cancer in developing countries: Effective screening and preventive strategies [Internet]. Washington State University; 2013. Available from: https://research.libraries.wsu.edu/xmlui/bitstream/handle/2376/4343/I_Mukakalisa_010237174.pdf?sequence=1

20. Udigwe, G O. Knowledge,attitude and practice of cervical cancer screening (Pap Smear) among female nurses in Nnewi, South Eastern Nigeria. Niger J Clin Pract. 2006;9(1):40–3.

21. Gormley RH, Quinley KE, Shih T, Szep Z, Steiner A, Ramogola-masire D. Use of Mobile Telemedicine for Cervical Cancer Screening in Gaborone , Botswana. Telemed Telcare [Internet]. 2011; Available from: http://clickmedix.com/home/wp-content/uploads/2009/11/Cervical-Cancer-Screening-in-Gaborone-Botswana.pdf

22. Labeit A, Peinemann F, Kedir A. Cervical cancer screening service utilisation in UK. Sci Rep. 2013 Jan;3:2362.

23. Saslow D, Solomon D, Lawson HW, Kulasingam S, Cain J, Francisco AR, et al. Screening guidelines for the prevention and early detection of cervical cancer. CA Cancer J Clin. 2013;62(3):147–72.

24. Arulogun , O,S and Maxwell , O O. Perception and utilisation of cervical cancer screening services among female nurses in University College Hospital, Ibadan, Nigeria. Pan Afr Med J. 2012;8688:1–8.

25. Herdman C, Sherris J. Planning appropriate cervical cancer prevention programmes [Internet]. 2nd ed. Seattle: Program for Appropriate Technology in Health (PATH); 2000. Available from: http://screening.iarc.fr/doc/cxca-planning-appro-prog-guide.pdf

26. World Health Organisation. WHO guidelines for screening and treatment of precancerous lesions for cervical cancer prevention [Internet]. 2013. Available from: http://apps.who.int/iris/bitstream/10665/94830/1/9789241548694_eng.pdf

27. Denny L, Quinn M, Sankaranarayanan R. Screening for cervical cancer in developing countries. Vaccine. 2006 Aug 31;24 Suppl 3:S3/71–7.

28. World Health Organisation. Everybody's business: Strengthening health systems to improve health outcomes. [Internet]. 2007. Available from: http://www.who.int/healthsystems/strategy/everybodys_business.pdf

29. Shekhar S, Sharma C, Thakur S, Raina N. Cervical Cancer Screening : Knowledge , Attitude and Practices among Nursing Staff in a Tertiary Level Teaching Institution of Rural India. Asian Pacific J Cancer Prev. 2013;14:3641–5.

30. Prevention International : No Cervical cancer. VIA method of cervical cancer prevention. 2014; Available from: http://www.pincc.org/cervical-cancer/prevention

31. Pothisuwan M, Pataradool K, Tangjitgamol S, Srijaipracharoen S, Manusirivithaya S, Thawaramorn T. Visual inspection with acetic acid for detection of high grade lesion in atypical squamous cells and low grade squamous intraepithelial lesions from cervical Pap smear. J Gynecol Oncol. 2011;22(3):145–51.

32. Gwanda Provincial Hospital Annual Report 2013. Gwanda Provincial Hospital Annual Report [Internet]. 2013. Available from: Not in public domain

33. United Nations Population Fund, Ministry of Health and Child Welfare Zimbabwe. Country Programme Action Plan (CPAP) Zimbabwe : 2012 - 2015 [Internet]. 2012. Available from: http://www.unfpa.org/sites/default/files/portal-document/Zimbabwe_CPAP 2012-2015.pdf.pdf

34. Bessler P, Aung M, Jolly P. Factors affecting uptake of cervical cancer screening among clinic attendees in Trelawny, Jamaica. Cancer Control. 2007 Oct;14(4):396–404.

35. Ndikom CM, Ofi BA. Awareness, perception and factors affecting utilization of cervical cancer screening services among women in Ibadan, Nigeria: a qualitative study. Reprod Health. 2012 Jan;9:11.

36. Singh S, Badaya S. Factors Influencing uptake of Cervical Cancer Screening among Women in India: A Hospital based Pilot Study. J Community Med Health Educ. 2012;02(06).

37. Alliance for Cervical Cancer Prevention. Improving Screening Coverage Rates of Cervical Cancer Prevention Programs: A Focus on Communities. 2004.

38. McFarland DM. Cervical cancer and Pap smear screening in Botswana: knowledge and perceptions. Int Nurs Rev. 2003;50(3):167–75.

39. Abotchie, P N., Shokar NK. Cervical Cancer screening among College students in Ghana. Int J Gynecol Cancer. 2010;19(3):412–6.

40. Vakfari A, Gavana M, Giannakopoulos S, Smyrnakis E, Benos A. Participation rates in cervical cancer screening : experience in rural Northern Greece. Hippokratia. 2011;346–52.

41. Kahesa C, Kjaer S, Mwaiselage J, Ngoma T, Tersbol B, Dartell M. Determinants of acceptance of cervical cancer screening in Dar es Salaam , Tanzania. BMC Public Health; 2012;12(1):1.

42. Boyer LE, Williams M, Calker LC, Marshall ES. Hispanic Women's Perceptions Regarding Cervical Cancer Screening. J Obstet Gynecol Neonatal Nurs. Blackwell Publishing Ltd; 2001;30(2):240–5.

43. Ncube B, Knight J, Bessler P, Jolly P. Factors Associated with the Uptake of Cervical Cancer Screening Among Women in Portland, Jamaica. N AMJ Med Sci. 2015;7(3):104–13.

44. Kivistik A, Lang K, Baili P, Anttila A, Veerus P. Women ' s knowledge about cervical cancer risk factors , screening , and reasons for non- participation in cervical cancer screening programme in Estonia. BMC Womens Health. BioMed Central Ltd; 2011;11(1):43.

45. Atuhaire L. Barriers and facilitators to uptake of cervical cancer screening among women accessing Maternal and Child Health services in Kampala , Uganda [Internet]. Available from: http://etd.uwc.ac.za/xmlui/bitstream/handle/11394/3924/Atuhaire_MPH_2013.pdf?sequence=1

46. Taruvinga M. Cancer screening outweighs resources. The Zimbabwe Mail [Internet]. Harare; 2014 Jul 25; Available from: http://www.zimville.com/blogs/p/14571/cervical-cancer-screening-outweighs-resources

47. Kagumire R. Cancer treatment out of reach for Ugandan women. Inter Press Service [Internet]. Soroti; 2010 Nov 4; Available from: http://www.ipsnews.net/2010/11/cancer-treatment-out-of-reach-for-ugandan-women/

48. Ackerson K, Gretebeck K. Factors influencing cancer screening practices of underserved women. J Am Acad Nurse Pract. 2007 Nov;19(11):591–601.

49. Ministry of Health and Child Welfare: Zimbabwe. The National Health Strategy for Zimbabwe (2009 - 2013).Equity and Equality: A people's right. Harare; 2013.

50. Zimbabwe National Statistics Agency. Multiple Indicator Cluster survey. 2014.

51. Zimbabwe National Statistics Agency. Zimbabwe National Report : Census 2012. Harare;

52. Gwanda Provincial Hospital Annual Report 2014. Gwanda Provincial Hospital Nursing Services second Quarter Report [Internet]. 2014. Available from: Not in public domain

53. Charan J, Biswas T. How to calculate sample size for different study designs in medical research. Indian J Psychol Med. 2013;35:121.

54. Martin K. 5 Ways to Increase Power in a Study [Internet]. 2014. Available from: http://www.theanalysisfactor.com/5-ways-to-increase-power-in-a-study/

55. McGaghie, W,C.; Bordage, G.; Crandall,S and Pangaro L. Research Design - Review Criteria. Acad Med. 2001;76(9).

56. Response Rates & Surveying Techniques [Internet]. 2009. Available from: https://www.utexas.edu/academic/ct//.../method/survey-Response.php?...

57. Joubert, G , Ehrlich , R, Katzenellenboge, J , Kaim, S A. Epidemiology A research manual for South Africa. 2nd editio. Oxford University Press Southern Africa; 2012.

58. Centre for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Questionnaire [Internet]. 2014. Available from: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2014_brfss.pdf

59. Swaddiwudhipong W, Chaovakiratipong C, Nguntra P, Mahasakpan P. A mobile unit : an effective service for cervical cancer screening among rural Thai women. Int J Epidemiol. 1999;35–9.

APPENDICES

Appendix 1: WITS ethical clearance certificate

R14/49 Mrs Fennie Mantula

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M140861

NAME: (Principal Investigator)	Mrs Fennie Mantula
DEPARTMENT:	School of Public Health Gwanda Provincial Hospital, Zimbabwe National University of Science and Technology, Bulawayo, Zimbabwe
PROJECT TITLE:	Uptake of Visual Inspection with Acetic Acid and Cervicography Screening among Women attending Gwanda Provincial Hospital in Zimbabwe
DATE CONSIDERED:	29/08/2014
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr A Mwisongo
APPROVED BY:	Professor A Woodiwiss, Co-Chairperson, HREC (Medical)
DATE OF APPROVAL:	24/10/2014

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix 2 : MRCZ approval letter

Telephone: 791792/791193/792747
Telefax: (263) - 4 - 790715
E-mail: mrcz@mrcz.org.zw
Website:- www.mrcz.org.zw

Medical Research Council of Zimbabwe
Josiah Tongogara / Mazoe Street
P. O. Box CY 573
Causeway
Harare

MRCZ APPROVAL LETTER

Ref: MRCZ/B/734 **07 November, 2014**

Fennie Mantula
60 Windermere Road,
Morningside
Bulawayo

RE: Application For Ethical Review and Approval of Study Entitled: Uptake of Visual Inspection with Acetic Acid Cervicography Screening Among Women Attending Gwanda Provincial Hospital Zimbabwe

Thank you for the above titled proposal that you submitted to the Medical Research Council of Zimbabwe (MRCZ) for review. Please be advised that the Medical Research Council of Zimbabwe has reviewed and approved your application to conduct the above titled study. This is based on the following:-

a) Study Protocol
b) Study Summary
c) English and isiNdebele Informed Consent Forms
d) English and isiNdebele Data Collection Tools

- **APPROVAL NUMBER : MRCZ/B/734**

The above details should be used on all correspondences, consent forms and documents as appropriate.

- **TYPE OF MEETING : Expedited review**
- **APPROVAL DATE : 07 November, 2014**
- **EXPIRATION DATE : 06 November, 2015**

After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the MRCZ Offices should be submitted one month before the expiration date for continuing review.

- **SERIOUS ADVERSE EVENT REPORTING**: All serious problems having to do with subject safety must be reported to the Institutional Ethical Review Committee (IERC) as well as the MRCZ within 3 working days using standard forms obtainable from the MRCZ Offices.
- **MODIFICATIONS**: Prior MRCZ and IERC approval using standard forms obtainable from the MRCZ Offices is required before implementing any changes in the Protocol (including changes in the consent documents).
- **TERMINATION OF STUDY**: On termination of a study, a report has to be submitted to the MRCZ using standard forms obtainable from the MRCZ Offices.
- **QUESTIONS**: Please contact the MRCZ on Telephone No. (04) 791792, 791193 or by e-mail on mrcz@mrcz.org.zw.

Other:

- Please be reminded to send in copies of your final research results for our records as well as for the Health Research Database
- You are also encouraged to submit electronic copies of your publications in peer-reviewed journals that may emanate from this study.

Yours Faithfully

.....

MRCZ SECRETARIAT
FOR CHAIRPERSON
MEDICAL RESEARCH COUNCIL OF ZIMBABWE

MEDICAL RESEARCH COUNCIL OF ZIMBABWE
2014 -11- 07
APPROVED
P.O. BOX CY 573 CAUSEWAY, HARARE

PROMOTING THE ETHICAL CONDUCT OF HEALTH RESEARCH

Appendix 3: Request letter to conduct research

60 Windermere Road

Morningside

Bulawayo

5 August 2014

The Medical Superintendent

Gwanda Provincial Hospital

P.O. Box 125

Gwanda

Re: Request for permission to conduct research at Gwanda Provincial Hospital

I am currently enrolled in the Master of Public Health programme at the University of the Witwatersrand in South Africa. I hereby seek your permission to conduct a research study at your institution. The study is entitled "**Uptake of Visual Inspection with Acetic Acid and Cervicography among women attending Gwanda Provincial Hospital in Zimbabwe."**

The study hopes to recruit approximately 200 women attending outpatient health services during the month of November 2014 to participate. Attached are copies of the research protocol and data collection instrument.

Upon completion of the study, the research findings will be communicated to your office and a bound copy of the full research report provided. I will follow up with a telephone call and will be happy to answer any questions should you require further information.

Your approval to conduct this study will be greatly appreciated.

Yours faithfully



Fennie Mantula (Student Number 861494)

Appendix 4 : Authorisation letter to conduct research

Telephone: +263 84 22224/5
or +263 84 22661-3

Fax: +263 84- 22443
Email: gwandahospital@gmail.com

ZIMBABWE

Ministry of Health
Child Care
Gwanda Provincial Hospital
P.O. Box 125
Gwanda

10 November 2014

Fennie Mantula
60 Windermere Road
Morningside
Bulawayo

RE: REQUEST TO CONDUCT A RESEARCH AT GWANDA PROVINCIAL HOSPITAL

The above subject refers.

This letter serves to confirm that your application for permission to conduct a research study on the Uptake of Visual Inspection with Acid Cervicography Screening Aong Women Attending Gwanda Provincial Hospital has been granted.

We hope to see you soon

Regards

P.T. CHIMBERENGWA (DR)
MEDICAL SUPERINTENDENT – GWANDA PROVINCIAL HOSPITAL

MIN. OF HEALTH & CHILD CARE
GWANDA PROVINCIAL HOSPITAL
MEDICAL SUPERINTENDENT
14 NOV 2014

Appendix 5 : Information sheet (English version)

Faculty of Health Sciences

School of Public Health

27 St Andrews Road

Parktown

Johannesburg

South Africa

SCHOOL OF PUBLIC HEALTH

Adult Informed Consent Form: Version 1.0 Date: 28/10/2014

Principal Investigator: Fennie Mantula

Phone numbers: 263–773738146

263–9–240140

Project Title: Uptake of Visual Inspection with Acetic Acid and Cervicography screening among women attending Gwanda Provincial Hospital in Zimbabwe

What you should know about this research study:

- I give you this consent form so that you may read about the purpose, risks and benefits of this research study.
- Routine care is based upon the best known treatment and is provided with the main goal of helping the individual patient. The main goal of research studies is to gain knowledge that may help future patients.
- You have the right to refuse to take part, or agree to take part now and change your mind later.
- Whatever you decide will not affect your regular care.

- Please review this consent form carefully. Ask any questions before you make a decision.
- Your participation is voluntary.

PURPOSE

You are being asked to participate in a research study on the uptake of Visual Inspection with Acetic Acid and Cervicography (VIAC) among women attending Gwanda Provincial Hospital in Zimbabwe. The purpose of the study is to aid in the development of appropriate strategies for the scale up of the cervical cancer screening programme in Gwanda Provincial Hospital. You were selected as a possible participant in this study because as a female who is/ has been sexually active and exposed to HPV, you are at risk of developing cervical cancer. Approximately two hundred women in this hospital will participate in the study.

PROCEDURES AND DURATION

If you decide to participate in this study, you will answer thirty nine questions which will be asked about yourself, whether you have used VIAC services, what you think could be contributory to the low usage of the service, and how the situation could be improved. VIAC stands for Visual inspection with Acetic Acid and Cervicography and is a cervical cancer screening method which entails applying acetic acid, vinegar like solution in the mouth of the womb to detect abnormal cells. If abnormal cells are present, they turn white and a camera is used to take pictures of the mouth of the womb which are seen on a screen. You are free not to answer questions you are not comfortable with. There will be no procedures involved in the study, no standard treatment procedures nor any experimental procedures. Depending on the answers I get from you, the questions will take about thirty minutes to answer.

RISKS AND DISCOMFORTS

There are no foreseeable risks of injury, discomfort or inconveniences which may arise from participating in this study as no form of treatment is involved. All that will be required of you is to answer questions which will be asked.

BENEFITS AND/OR COMPENSATION

There are no invasive procedures associated with this study; therefore there are no direct benefits or compensation you will get by participation in the study.

ALTERNATIVE PROCEDURES OR TREATMENTS

There are no alternative procedures related to this study or courses of treatment which may be advantageous to you as a participant.

CONFIDENTIALITY

If you indicate your willingness to participate in this study by signing this document, I plan to disclose the results of the study to the Gwanda Provincial Hospital executive team for initiating improvements in the delivery of VIAC services if need be. No information obtained in this study can be identified with you.

ADDITIONAL COSTS

There are no additional costs you will meet by participating in the study as you are not required to visit the researcher.

IN THE EVENT OF INJURY

No injuries are anticipated in this study as the study only involves answering questions.

VOLUNTARY PARTICIPATION

Participating in this study is completely voluntary and no one is forced to take part. If you agree to take part, you are free to refuse to answer any question you are not comfortable with, or to withdraw from participating at any time during the session without having to give a reason or suffering any penalty. If you decide not to participate in this study, your decision will not affect your future relations with the researcher, Gwanda Provincial Hospital, its personnel and associated hospitals.

Appendix 6 : Consent form (English version)

Protocol Version Number: 1.0 Date 28/10/2014

Project Title: Uptake of Visual Inspection with Acetic acid and Cervicography screening among women attending Gwanda Provincial Hospital in Zimbabwe

OFFER TO ANSWER QUESTIONS

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

AUTHORIZATION

You are making a decision whether or not to participate in this study. Your signature indicates that you have read and understood the information provided above, have had all questions answered and have decided to participate.

Name of Research Participant (please print)…….Date……

Signature of participant…….Time……

Name of Researcher……Signature…… Date…….

YOU WILL BE OFFERED A COPY OF THIS CONSENT FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the researcher including; questions about the research, your rights as a research participant or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Medical Research Council of Zimbabwe (MRCZ) on telephone (04)791792 or (04)791193 and cell phone lines 0772 433 166 or 0779 439 564. The MRCZ Offices are located at the National Institute of Health Research premises at Corner Josiah Tongogara and Mazowe Avenue in Harare.

Appendix 7 : Information sheet (Ndebele version)

Faculty of Health Sciences

School of Public Health

27 St Andrews Road

Parktown

Johannesburg

South Africa

SCHOOL OF PUBLIC HEALTH

Ugwalo oluphathelane lokuvuma ukuphatheka kuchwayisiso uzwisisile–Version 1.0

Ilanga: 28/10/2014

Umchwayisisi: Fennie Mantula (Master in Public Health)

Inombolo zefoni: 263–773738146

: 263–9–240140

Isihloko sochwayisiso: Indlela okwemukelwa ngayo uhlelo lwe VIAC kwabesifazana abadinga ezempilakahle esibhedlela esikhulu seGwanda e Zimbabwe.

Okumele ukwazi ngaloluchwayisiso:

- Ngikupha leli phepha lokuvuma kwakho ukuba yingxenye yaloluchwayisiso ukuze ubale njalo uzwisise injongo, ingozi engabakhona, kanye lozakuthola ekuphathekeni kwakho.
- Usizo oluphiwa ogulayo lugxile ekwalatshweni okungcono kulakho konke, njalo luphiwa ngenjongo yokunceda ngamunye ogulayo kuqondane lalokho okumkhathazayo. Isiqokoqela sezichwayisiso ezenziwayo kuyikuthola ulwazi olunganceda ezinye izigulani ngesikhathi esizayo.
- Ulalo ilungelo lokwala ukuba yingxenye yaloluchwayisiso, kumbe ukuntshintsha inqgondo yakho sokuphambilini lanxa ubuke wavuma.

- Isinqumo ozasithatha, asisoze siguqule indlela ozathola ngayo ukuphathiswa esibhedlela, kungakhathalekile ukuba yisiphi.
- Hlolisisa ugwalo lolu lokuvuma ngonanzelelo njalo ubuze imibuzo ongabe ulayo ungakathathi isinqumo.
- Ukuba yingxenye yaloluchwayisiso akubanjwa ngamandla.

INJONGO

Uyacelwa ukuba ube yingxenye yaloluchwayisiso olukhangela ngendlela omama abeza lapha esibhedlela esikhulu se Gwanda abathatha ngayo uhlelo lokuhlolwa komlomo wesibeletho kukhangelwa imvukuzane. Lolu hlelo lubizwa ngokuthi yi VIAC. Injongo yaloluchwayisiso iyikuncedisa ukubumba amasu afaneleyo angenza ukuba uhlelo lwe VIAC lwamkeleke kabanzi kubomama abeza lapha esibhedlela. Ukhethiwe ukuba ngomunye wabangathatha ingxenye kuloluchwayisiso ngoba njengomuntu wesifazana oya kumbe oseke waya emancansi ulengozi yokuthola imvukuzane yomlomo wesibeletho. Phose abesifazana abangamakhulu amabili bazaphatheka kuloluchwayisiso.

INDLELA EZILANDELWAYO LESIKHATHI ESIKHANGELELWEYO

Nxa ukhetha ukuphatheka kuloluchwayisiso, uzaphendula imibuzo angamatshumi amathathu latshiyagalolunye ephathelane lawe, ukuba usuke wasebenzisa uhlelo lwe VIAC, izizatho obona zingabe zibangela ukuthi omama abanengi bangaluthatheli phezulu loluhlelo, lokuba lokhu kungalungisiswa njani. Ibala elithi VIAC limele ukuthi “Visual inspection with Acetic Acid and Cervicography” khona kuyindlela yokuhlola umlomo wesibeletho kudingwa imvukuzane. Ukuhlolwa lokhu kwenziwa ngokucomba umlomo wesibeletho ngomuthi othiwa yi acetic acid owenelisa ukuveza inyama ezingasela mpilo enhle. Nxa sekulenyama esezilimazekile, ziphenduka zibemhlophe ngemva kokufakwa kwe acetic acid. Imifanekiso eveza isimo somlomo wesibeletho iyabe itshengiswa enkombaneni, umahlolwa laye ezibonela. Akusoze kube lokuhlolwa kumbe ukwelatshwa kuloluchwayisiso.

Ukhululekile ukungaphenduli imibuzo engakuphathi kahle. Kusiya ngendlela ozaphendula ngayo, kukhangelelwe ukuba kungathatha imizuzu engaba ngamatshumi amathathu ukuba imibuzo yonke iphendulwe.

INGOZI LOKUHLUKUMEZEKA

Akukhangelelwanga ukulimala, ukuhlukumezeka kumbe ukuphambaniseka okungavela ngokuba yingxenye yaloluchwayisiso ngoba akusoze kube lokwelatshwa. Okudingekayo nje yikuba uphendule imibuzo ezabe ibuzwa.

INZUZO KUMBE UKUBHADALWA

Akusoze kuthintwe mzimba kuloluchwayisiso ngakho akulanzunzo ozayithola iqonde wena mathupha ngokuba yingxenye yochwayisiso. Impumela yochwayisiso izaphathisa ngokusebenzisa impendulo zenu ekwenzeni ukuba uhlelo lwe VIAC lulethwe ngendlela engcono nxa kulendingeko. Lokhu kungenza ukuba abesifazana abanengi bayifinyelele i VIAC.

EZINYE IZINDLELA KUMBE UKWELATSHWA OKUNGASETSHENZISWA

Ayikho enye indlela etshiyeneyo kulale esetshenzisiweyo, kumbe ukwelatshwa okungenziwa kuloluchwayisiso okungakubeka kubanga elingcono ekuphathekeni kwakho kuchwayisiso lolu.

UKUNANZELELA UKUBA IMPENDULO ZAKHO ZIGCINAKALE KUHLE

Nxa uvuma ukuba yingxenye yaloluchwayisiso ngokusayina lolugwalo, yazi ukuba impumela ezatholakala kuchwayisiso izalethwa kuziphathamandla zesibhedlela ukuze zithole indlela zokuphathisa ukuba uhlelo lwe VIAC lwethulwe ngendlela engcono nxa kutholakala indingeko yalokho. Impendulo ozazinika lapha akusoze kube lendlela yokuba kukhanye ukuba zivele kuwe.

EZINYE INDLEKO

Azikho ezinye indleko ongazikhangelela ngokuba yingxenye yo chwayisiso lolu ngoba akusoze kudingeke ukuba uphinde uhlangane lomchwayisisi.

NXA KUNGENZEKA ULIMALE

Akula ngozi yokulimala eqatshelwe ukuba ingavela kuloluchwayisiso ngoba kuyabe kubuzwa imibuzo kuphela nje kungekho okunye okwenziwayo.

UKUBA YINGXENYE YOCHWAYISISO NGAPHANDLE KOKUBANJWA NGAMANDLA

Ukuba yingxenye yaloluchwayisiso kuyikuzikhethela komuntu njalo akubanjwa ngamandla. Nxa uvuma ukuba yingxenye, ukhululekile ukungaphenduli imibuzo ongelasifiso sokuyiphendula, kumbe ukuphuma kuchwayisiso ngesikhathi usubuzwa imibuzo ngaphandle kwe ndingeko yokunika isizatho. Awusoze ujeziswe ngokwenza njalo. Nxa njalo ukhetha ukungabi yingxenye yochwayisiso, isinqumo sakho asisoze siphambanise ubudlelwano bakho lomchwayisisi, isibhedlela se Gwanda kunye lezisebenzi zaso, kumbe ezinye isibhedlela ongadinga uncedo kuzo.

Appendix 8 : Consent form (Ndebele version)

Protocol Version Number: 1.0 Date 28/10/2014

Isihloko sochwayisiso

Indlela okwamukelwa ngayo uhlelo lwe VIAC kwabesifazana abadinga ezempilakahle esibhedlela esikhulu se Gwanda eZimbabwe

ITHUBA LOKUCHASISA

Ungakasayini lolu gwalo, buza konke ongabe ungakuzwisisi ngaloluchwayisiso. Ungajahi ekucabangeni ngokuba yingxenye kuchwayisiso lolu.

UKUNIKA IMVUMO

Uthatha isinqumo sokuba ubeyingxenye kumbe ungabi yingxenye kuloluchwayisiso. Isiginetsha yakho itshengisa ukuba ubalile wazwisisa konke okulethwe phezulu, imibuzo yakho yonke iphendulwe, njalo usukhethe ukuba yingxenye yochwayisiso.

Ibizo lo phathekayo (Bhala ngamabala akhanyayo)

…….....Ilanga……....

Isiginetsha yophathekayo

…….....Isikhathi……

Ibizo lomchwayisisi

……Isiginetsha…….Ilanga……..

UZAPHIWA UGWALO OSAYINE KULO UVUMA UKUPHATHEKA KUCHWAYISISO UKUZE ULUGCINE

Nxa ulemibuzo ephathelane lalolu chwayisiso kumbe ukuvuma kwakho ukuphatheka engaphandle kwaleyo ephendulwe ngumchwayisisi kugoqela leqondana lochwayisiso, amalungelo akho njengomuntu ophathekileyo, kumbe nxa ungazange uphathwe kuhle ulesifiso sokukhuluma lomunye ngaphandle kwabachwayisisi,khululeka ukuthintana labe Medical Research Council of Zimbabwe (MRCZ) kunombolo zocingo ezithi (04)791792 kumbe (04)791193 loba usebenzise inombolo zabomakhala ekhukhwini ezithi 0772 433 166 kumbe 0779 439 564. Amawofisi e MRCZ atholakala e National Institute of Health Research ekhoneni lika Josiah Tongogara lo Mazowe Avenue e Harare.

Appendix 9 : Researcher administered questionnaire (English)

RESEARCHER ADMINISTERED QUESTIONNAIRE

Questionnaire No……

Date…….

Research title: Uptake of Visual Inspection with Acetic Acid and Cervicography screening among women attending Gwanda Provincial Hospital in Zimbabwe.

Instructions for researcher

Please tick the given response (s) in the appropriate box (es) or write the responses in the spaces provided.

SECTION A : SOCIO-DEMOGRAPHIC DATA:

1. Your age group (years)

Below 20	
20–29	
30–39	
40–49	
50–59	
60+	

2. Marital Status

Never married	
Married / living with partner	
Divorced / separated	
Widowed	

If not married move to question 4.

3. Employment status of spouse/ partner

Unemployed	
Self-employed	
Formally employed	

4. Number of children

0	
1–2	
3–4	
5+	

5. Educational attainment

Primary school or less	
Secondary / High school	
Tertiary / College	

6. Residential Area

Rural	
Urban	
Mine	

7. What was your age at first sexual intercourse (years)

Less than 15	
15–19	
20–24	
25+	

8. How many lifetime sexual partners have you had?

1	
2–4	
More than 4	

9. Employment Status

Full time housewife	
Unemployed	
Self employed	
Formally employed	

10. Financial situation

Dependent on spouse	
Independent	

Dependent on other, specify

……..……

11. Monthly household income (United States Dollars)

Less than 100	
100 – 500	
501 – 1000	
Above 1000	

12. Which is your nearest health facility?

Urban within Gwanda town	
Rural within Gwanda district	
Mine within Gwanda district	
Facility outside Gwanda district within Mat South Province	

Other, please specify

……

13. Is Gwanda Provincial Hospital your primary referral centre?

Yes	
No	

14. If answer is no, why have you come to this facility today?

Have been referred	

Other reason, please specify

……

……

15. Please estimate the distance from your usual health facility to Gwanda P Hospital

Less than 5km	
5–10km	
11–20km	
More than 20 km	

16. Where did you deliver with your last pregnancy?

Gwanda Provincial Hospital	
Other health facility	
Home	

If delivered at home, move to question 18.

17. Were you given information on cervical cancer screening after delivery?

Yes	
No	

SECTION B: UPTAKE OF VIAC

18. Have you ever been screened for cervical cancer?

Yes	
No	

19. Have you had VIAC screening since April 2013?

Yes	
No	

20. Have you had VIAC screening in Gwanda Hospital since April 2013?

Yes	
No	

If answer to questions 18 – 20 is no, ask question 21 and then skip to question 26. If answer is yes, move to question 22.

21. What are your reasons for not screening?

……
……
……

22. What was the reason for screening?

Routine screening	
Had a gynaecological problem	

Other reason, please specify

……

23. Who suggested the last screening test?

I asked for it	
Nurse	
Doctor	

Other, please specify

……

24. Did you have the opportunity of discussing the result with your service provider?

Yes	
No	

If answer is no, please explain why not

……

25. Did you discuss the result with other family members or friends?

Yes	
No	

SECTION C

KNOWLEDGE OF CERVICAL CANCER AND VIAC SCREENING SERVICES

26. Have you ever heard of cervical cancer?

Yes	
No	

If answer is no, researcher gives information and moves to question 31.

27. Is cervical cancer a public health problem among women in Zimbabwe?

Yes	
No	

28. Cervical cancer can lead to death

Yes	
No	

29. The following are risk factors for cervical cancer

Having many sexual partners	
Use of Intrauterine contraceptive device	
Having many children	
Early sexual debut	
Repeated sexually transmitted infections	
Genetic predisposition	
All women in a sexual relationship	
HIV	
Poor hygiene	

30. The following are signs and symptoms of cervical cancer

Post coital bleeding	
Headache	
Pelvic pain	
Blood stained vaginal discharge	
Fever	
Post –menopausal bleeding	

31. Have you ever heard about the VIAC screening programme?

Yes	
No	

If answer is no, researcher gives information and moves to question 36.

32. What was your source of information about VIAC screening?

Health worker at clinic / Hospital	
MCH clinic	
Media	
Friend / relative	

Other, please specify

……

33. VIAC screening can detect changes in the cervix before they progress to cancer

Yes	
No	

34. Regular VIAC screening can help prevent cervical cancer

Yes	
No	

35. If changes are detected early from VIAC screening, they can be easily cured

Yes	
No	

SECTION D: FACTORS INFLUENCING THE UPTAKE OF VIAC

36. Are you satisfied with the services you receive in this hospital?

Yes	
No	

Please give reasons for your answer

……

……..

If never been screened, skip to question 38

37. Are you satisfied with the services you receive at the VIAC clinic?

Yes	
No	

Please give reasons for your answer

……

……

38. What do you perceive as barriers to accessing VIAC screening at this hospital?

Lack of adequate information about VIAC	
Health workers are not giving the advice and encouragement to access screening	
No perceived risk for cervical cancer	
Fear of knowing one has cancer	
Financial constraints (transport costs and payment for treatment after diagnosis)	
The test is embarrassing	
Fear of pain of the test	
Negative attitudes of service providers	
Prerequisite HIV test	
No time to come to clinic, too busy	
Difficulty in accessing screening services, not available at local facility	
Reluctance to go for a test in the absence of disease	

SECTION E: RECOMMENDATIONS FOR IMPROVED UPTAKE OF VIAC

39. What are your recommendations for improving the uptake of VIAC screening at Gwanda Provincial Hospital?

Use Village Community Workers to give health education on cervical cancer screening in rural areas	
Distribute pamphlets to all women coming to health facilities	
Increase awareness on screening by addressing women at meetings	
Make use of community leaders to spread the message	
Make VIAC screening a routine post-natal care procedure	
Offer VIAC services at Rural Health facilities	
Provide mobile VIAC services for rural areas	
Hold workshops in all health facilities for women	
Place VIAC posters in strategic places so that people can read	
Give health education in all health facilities even if they don't offer VIAC	

Other please specify…….

… ……

THANK YOU FOR PARTICIPATING IN THIS STUDY.

Appendix 10 : Researcher administered questionnaire (Ndebele)

IMIBUZO EZABUZWA NGUMCHWAYISISI

Questionnaire No……

Date……..

Isihloko sochwayisiso:

Indlela okwamukelwa ngayo uhlelo lwe VIAC kwabesifazana abadinga ezempilakahle esibhedlela esikhulu se Gwanda

Izixwayiso kumphenyisisi

Maka ngo (x) ebhokisini eliphambi kwempendulo ozayiphiwa, njalo ubhale impendulo ezikhexeni eziphiweyo lapho okufanele khona

IMIBUZO EPHATHELANE LAWE:

1. Lapho okuwela khona iminyaka yokuzalwa kwakho

Ngaphansi kwamatshumi amabili	
Phakathi kwamatshumi amabili lamatshumi amabili latshiyagalolunye	
Phakathi kwamatshumi amathathu lamatshumi amathathu latshiyagalolunye	
Phakathi kwamatshumi amane lamatshumi amane latshiyagalolunye	
Phakathi kwamatshumi amahlanu lamatshumi amahlanu latshiyagalolunye	
Amatshumi ayisithupha kusiya phezulu	

2. Isimo ngomendo

Angikaze ngende	
Ngendile	
Sengehlukana lomkami	
Ngingumfelokazi	

Nxa engendanga yana kumbuzo ka 4

3. Umsebenzi womkakho

Kasebenzi	
Uyazisebenza	
Uqhatshiwe	

4. Inani labantwana olalo

Angilabantwana	
Oyedwa kumbe ababili	
Abathathu kumbe abane	
Abahlanu kusiya phezulu	

5. Isibanga semfundo yakho

Imfundo yaphansi kumbe awuyanga esikolo	
Imfundo yaphezulu	
Ngaqeqetsha kumfundo ephakemeyo	

6. Indawo ohlala kuyo

Emaphandleni	
Edolobheni	
Emgodini	

7. Wawuleminyaka emingaki uqala ukuya emacansini?

Engaphansi kwetshumi lanhlanu	
Phakathi kwelitshumi lanhlanu letshumi laficwamunwe munye	
Phakathi kwengamatshumi amabili lamatshumi amabili lane	
Phakathi kwengamatshumi amabili lanhlanu lamatshumi amabili laficwa munwe munye	

8. Impilo yakho yonke usuye emacansini labantu abangaki?

Oyedwa	
Ababili kusiya kwabane	
Abangaphezu kwabane	

9. Mayelana lomsebenzi

Ngingumama wendlu okugcweleyo	
Angisebenzi	
Ngiyazisebenza	
Ngiqhatshiwe	

10. Indlela othola ngayo imali

Ngiphiwa ngumkami	
Ngiyenelisa ukuzitholela	

Ngiyiphiwa ngabanye: tshono ukuthi ngubani

……

11. Imali etholwa yimuli ngenyanga (US$)

Ingaphansi kwekhulu	
Iphakathi kwekhulu lamakhulu amahlanu	
Iphakathi kwamakhulu amahlanu lanye lenkulungwane	
Ingaphezu kwenkulungwane	

12. Yiphi indawo othola usizo lwezempilakahle eseduze lawe?

Eklinika esedolobheni le Gwanda	
Eklinika esemaphandleni kusiqinti seGwanda	
Eklinika yemayini kusiqinti se Gwanda	
Kwenye iklinika/isibhedlela esingekho e Gwanda kodwa sise Mat South	

Kwenye indawo, yitsho

……

13. Isibhedlela seGwanda yiso lapho isibhedlela sesiqinti sakini esidlulisela khona na?

Ye	
Hatshi	

14. Nxa kungenjalo, kuyini okwenze uze kulesisibhedlela namuhla?

Ngithunyezwe lapha ukuzothola ukwelatshwa okuphakemeyo	

Nxa kulesinye isizatho sitsho

……

……

15. Fanisela umango wokusuka lapho owande ukuthola khona uncedo lwezempilakahle usiza lapha esibhedlela seGwanda.

Kungaba ngaphansi kwamakhilomitha amahlanu	
Kusukela kumakhilomitha amahlanu kusiya kwalitshumi	
Kusukela kutshumi lanye lamakhilomitha kusiya kumatshumi amabili	
Kungaba ngaphezu kwamakhilomitha angamatshumi amabili	

16. Umntanakho wokucina wambelethela ngaphi?

Esibhedlela esikhulu seGwanda	
Kwesinye isibhedlela / iklinika	
Ngabelethela ngekhaya	

Nxa wabelethela ngekhaya, dlulela kumbuzo ka 18.

17. Wanikwa ulwazi mayelana lokuhlolwa kwemvukuzane yomlomo wesibeletho ngemva kokubeletha yini?

Ye	
Hatshi	

<u>UKWAMUKELEKA KWE VIAC</u>

18. Usuke wahlolwa umlomo wesibeletho kukhangelwa imvukuzane yini?

Ye	
Hatshi	

19. Kusukela ku Mabasa ka 2013, usuke wahlolwa kusetshenziswa i VIAC yini?

Ye	
Hatshi	

20. Kusukela ku Mabasa ka 2013, usuke wahlolwa nge VIAC esibhedlela se Gwanda yini?

Yes	
No	

Nxa impendulo yemibuzo 18 kusiya ku 20 ingu hatshi, buza u 21 ubususeqela ku 26.
Nxa impendulo ingu ye, yeqela ku 22

21. Imbangela enza ungahlolwa ingabe iyini?

……

……

……

22. Yisiphi isizatho esenza ukuba uhlolwe?

Ukuqakathekisa ukuhlolwa okukhuthazwa ngezikhathi ezimisiweyo	
Ngangilohlupho oluphathelane lemikhuhlane yabomama	

Nxa ulesinye isizatho, sitsho

……

……

23. Ekuhlolweni kwakho kokucina, ngubani owayekuthazile?

Ngazicelela	
Ngumongikazi	
NguDokotela	

Nxa ulempendulo etshiyeneyo, tshono owakukhuthazayo.

……

24. Waba lethuba lokuxoxisana lowezempilakahle mayelana lempumela yokuhlolwa kwakho na?

Ye	
Hatshi	

Nxa kungabanga lalelothuba, isizatho sasiyini?

……

……

25. Waxoxela abanye abemuli kumbe abangane ngempumela yokuhlolwa kwakho na?

Ye	
Hatshi	

ULWAZI LWAKHO MAYELANA LEMVUKUZANE YOMLOMO WESIBELETHO KANYE LOKUHLOLWA KUSETSHENZISWA IVIAC

26. Usuke wezwa ngomkhuhlane wemvukuzane yomlomo wesibeletho yini?

Ye	
Hatshi	

Nxa impendulo ingu hatshi, umphenyisi uyachaza ngamafitshane abe sedlulela ku 31.

27. Umkhuhlane wemvukuzane yomlomo wesibeletho uluhlupho kwabesifazana eZimbabwe

Ye	
Hatshi	

28. Imvukuzane yomlomo wesibeletho ingabangela ukufa

Ye	
Hatshi	

29. Lokhu kungafaka omama engozini yokuthola imvukuzane yomlomo wesibeletho

Ukuba labantu abanengi oya labo emacansini	
Ukusebenzisa iluphu ekuhleleni imuli	
Ukuba labantwana abanengi kakhulu	
Ukuqala ukuya emacansini umuntu esesemncinyane	
Ukugula umkhuhlane wengulamakhwa izikhathi ezinengi	
Nxa kulomkhuhlane ofanayo ogulwe ngabanengi emulini	
Wonke owesifazana nxa elomuntu oya emacansini laye	
Umkhuhlane wengculazi	
Ukungaphathi ingensitha ihlanzekile	

30. Lezi yizitshengiselo zomkhuhlane wemvukuzane yomlomo wesibeletho

Ukopha ngemva kokuhlangana emacansini	
Ukutshaywa likhanda	
Ubuhlungu besisu obumaqondana lesibeletho	
Ukuchitha ingcekeza yangaphansi ehlangane legazi	
Ukutshisa umzimba	
Ukopha ngemva kokuba umuntu sewama ukuya esikhathini	

31. Usuke wezwa ngohlelo lwe VIAC yini?

Ye	
Hatshi	

Nxa impendulo ingu hatshi, chasisa ngamafitshane ubususiya kumbuzo 36.

32. Uhlelo lolu waluzwa ngobani?

Ngabezempilakahle eklinika/ esibhedlela	
Eklinika lapho okubonwa omama labantwana	
Ezindabeni	
Ngomngane kumbe isihlobo	

Nxa uleyinye impendulo ngaphandle kwalokhu okubethiweyo, yitsho.

……

33. Ukuhlolwa kusetshenziswa i VIAC kuyatshengisa ukuntshintsha kwesimo somlomo wesibeletho kungakadluleli phambili kwaba yimvukuzane.

Ye	
Hatshi	

34. Ukuhlolwa nge VIAC ngezikhathi ezimisiweyo kungayivikela imvukuzane yomlomo wesibeletho.

Ye	
Hatshi	

35. Nxa ukuntshintsha komlomo wesibeletho kubonakale masinyane ekuhlolweni nge VIAC, ukwelatshwa kwakhona kulula

Ye	
Hatshi	

IZIZATHO EZINGABE ZIFUQA ABESIFAZANA UKWAMUKELA KUMBE UKUNGAMUKELI UHLELO LWE VIAC

36. Uyasuthiseka ngesiphatho elisithola kulesisibhedlela yini?

Ye	
Hatshi	

Nika izizatho zempendulo yakho

……
……

Nxa engakaze ahlolwe, Yana kumbuzo 38.

37. Uyasuthiseka ngesiphatho elisithola eklinika ye VIAC yini?

Ye	
Hatshi	

Nika izizatho zempendulo yakho

…….……
……

38. Unakanela ukuthi yiphi imigoqo evimbela abesifazana ukuba bangathatheli uhlelo lwe VIAC phezulu lapha esibhedlela esikhulu seGwanda?

Ukuswela ulwazi olweneleyo ngaloluhlelo	
Ukungacetshiswa lokukhuthazwa ngohlelo lwe VIAC ngabezempilakahle	
Ukungaboni ingozi yokuthola umkhuhlane wemvukuzane yomlomo wesibeletho	
Ukwesaba impumela embi	
Uhlupho lwemali yokuza lapha lokubhadalela ukwelatshwa nxa usuhloliwe	
Indlela okuhlolwa ngayo iyayangisa	
Ukwesaba ubuhlungu bokuhlolwa	
Ukungaphathwa kahle ngabezempilakahle	
Kudingeka ukuba uqale uhlolwe iHIV	
Ukuswelakala kwesikhathi sokuzahlolwa	
Ubunzima bokufinyelela ukuhlolwa – akuhlolwa eklinika eseduze lathi	
Ukudonda ukuyahlolwa ngoba ngingaguli	

39. Macebo bani angenziwa ukuze abesifazana bathathele uhlelo lwe VIAC phezulu lapha esibhedlela esikhulu seGwanda?

Akusetshenziswe ama VCW emaphandleni ukufundisa abantu ngohlelo lwe VIAC	
Abesifazana abeza endaweni zokudinga impilakahle abaphiwe amaphepha afundisa nge VIAC	
Abesifazana kabalandwe emihlanganweni batshelwe ngohlelo lwe VIAC	
Abaphathi bezindawo kabasetshenziswe ukumemezela lokuphakamisa uhlelo lwe VIAC	
IVIAC ayenziwe ibe yingxenye yokuhlolwa kwabomama bonke ababelethileyo	
I VIAC ayibe khona kuwo wonke amaklinika emaphandleni	
Akube laba suka esibhedlela lesi behamba behlola abesifazana emaphandleni	
Akulungiswe izifundo ngeVIAC ezizaphiwa abesifazana ezindaweni zonke zokwelaphela	
Akufakwe imibhalo nge VIAC ezindaweni okutholakala khona abantu abanengi ukuze babale	
Akufundiswe nge VIAC kuzindawo zonke zokwelaphela lanxa kungahlolwa kulezondawo	

Nxa kulamanye amacebo angabethwanga, watsho

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NGIYABONGA NGOKUTHATHA ISIKHATHI SAKHO SOKUBA UPHATHEKE KULOLUCHWAYISISO