

**KNOWLEDGE, ATTITUDINAL DISPOSITION AND WILLINGNESS OF
MEN TO SUPPORT CERVICAL CANCER SCREENING IN IBADAN
NORTHEAST LOCAL GOVERNMENT AREA, OYO STATE**

BY

CHUKWUEDO AWELE OBIAGELI JULIAN

B.Sc.Ed (DELSU)

MATRIC NO: 162480

**A DISSERTATION SUBMITTED IN THE DEPARTMENT OF HEALTH
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ABSTRACT

Cervical Cancer (CC) is a major public health challenge in Nigeria. Screening services for detecting the disease in its asymptomatic stage is poorly utilised by women. Although, men are dominant decision makers on women's utilisation of reproductive health services, their knowledge and disposition to CC screening have not been fully explored. This study was therefore aimed at assessing knowledge, attitudinal disposition and willingness of men to CC screening in Ibadan North-East Local Government Area (IBNELGA) Oyo state, Nigeria.

In this cross-sectional survey, a four-stage sampling procedure was used to select the Local Government Area, wards, communities, and 304 men aged 20-69 years. Four focus group discussion (FGD) sessions, one in each of the four randomly selected wards was conducted. A pretested interviewer-administered questionnaire, which included socio-demographic characteristics, a 20-point knowledge, 16-point attitudinal, 10-point willingness scales, and factors that may enhance men's support for spousal screening was used for data collection. Knowledge scores <10 and ≥ 10 points were classified as poor and good, attitudinal disposition scores ≤ 8 and $8 >$ points were categorised as negative and positive, willingness scores of <7 and ≥ 7 points as unwilling and willing respectively. The FGD was analysed using thematic approach and quantitative data using descriptive statistics, Chi-square test and logistic regression model at 5% level of significance.

Age of respondents was 35.9 ± 9.7 years. Few (2.1.0%) had primary education. 59.9% had secondary education and 16.1% had tertiary education. Most (79.6%), had ever been married. Respondents who were aware of the symptoms of CC, the risk factors and that screening prevents CC were 1.3%, 4.6%, and 42.0% respectively. Some (35.5%) perceived CC as a curse to promiscuous women, 40.5% perceived their spouse not susceptible to CC and yet they believed CC screening is helpful, though felt they lack adequate knowledge. Knowledge score was 6.0 ± 5.0 and many (78.6%) had poor knowledge of CC screening. Attitudinal disposition score was 9.4 ± 4.4 and 45.7% had negative attitudinal disposition, while willingness score was 7.5 ± 2.3 and majority (69.1%) were willing to support CC screening. Major actions recommended that can enhance men's support for CC screening include awareness creation (86.9%), and subsidisation of screening fee (40.3%). Respondents with tertiary education were more likely to have good knowledge of CC screening than those with

primary education (OR:3.5, CI:1.5-8.1). Men with good knowledge were more likely to have positive attitudinal disposition (OR:20, CI:7.0-56.2) than those with poor knowledge. Also, respondents with positive attitudinal disposition (OR: 2.0, CI:1.2-3.3) were willing to support spouse's screening. The FGD participants affirmed willingness to permit spouses to be screened if they have adequate knowledge of the disease, where screening service can be conducted and affordability of screening charges.

Good knowledge was associated with positive attitudinal disposition and had positive influence on men's willingness to support CC screening. Therefore, continuous community-based health education is suggested to improve knowledge of men on CC screening.

Keywords: Cervical cancer screening, Men's spousal support, Attitudinal disposition .

Word count: 467

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DEDICATION

This work is dedicated to the Almighty God who made this possible even when it seemed it was no longer possible, him alone I give all the glory and praise. I also dedicated it to my Late parents Mr and Mrs M.O Chukwudo who did not wait to see me complete this MPH programme.

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I will not forget to mention my wonderful roommate Miss Chinenye Afonie for her encouragement, Christiana Todowede and Mrs Sanni my course mates who assisted in data collection. I want to now specially and very importantly appreciate my beloved husband, brother and friend Austine Oyemike O. for being exceptionally supportive and a very understanding guy.

CHUKWUEDO, Awela.

CERTIFICATION

I certify that this work was carried out by Chukwudo Awele Obiageli Julian, in the Department of Health Promotion and Education, Faculty of Public Health.

Supervisor

Dr. Oyewole O. E.

Lecturer, Department Of Health Promotion and Education

Faculty of Public Health

University of Ibadan, Nigeria.

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List of Acronyms

- CDC-Centre for Disease Control
- ACCP-Alliance for Cervical Cancer Prevention
- UICC-Union for International Cancer Control
- ACS-American Cancer Society
- NCI-National Cancer Institute
- IARC-International Agency for Research on Cancer
- ICPD-International Conference on Population Development
- NPC-National Population Commission
- WHO-World Health Organisation
- HPV-Human Papilloma Virus
- CC-Cervical Cancer
- HR-High Risk
- IBNLGA-Ibadan North-East Local Government Area
- FGD-Focus Group Discussion

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Involvement of males is vital in promoting their own and their partners' reproductive health. Such involvement should prevail throughout the relationship, leading to open communication about planning families, using contraceptives effectively, and reporting signs of abnormalities early to health care professionals for prompt treatment (Maja, 2006). WHO 2005, has stated that males should be empowered through the provision of information and services targeting boys, youth and adults within home, community, and work settings. Male involvement in reproductive health should be mainstreamed into all major thrusts of the strategic framework. Men of all ages must be educated about responsible sexual behaviour, be encouraged to treat women as equals and respect them. Male participation has become especially important due to the HIV/AIDS pandemic, the increasing prevalence of STDs, and the problem of unwanted pregnancies (Maja, 2006).

Patriarchy nature of African men implies that women have to depend almost entirely on men for every decision in the family (like when to get pregnant, number of babies to have, whether or not to go for antenatal attention, to mention a few), even when they are directly affected by such decisions (Nwokocho, 2008), with all the important decisions taken by the male head while the woman's fundamental social role is to bear and raise children and engage in reproductive tasks within the household, wives are usually socially, and economically dependent on their husbands (Ijadunola, Tijilayo, Kayode, Afolabi, Olapeju and Funmilola, 2010). However, as a strategy, the empowerment of women without involving men is not a total solution, and can create more conflict in utilisation of health care services, thereby defeating the programme's original intention.

Cervical cancer results from the uncontrolled growth of severely abnormal cells in the cervix, the opening of the uterus or womb (American Cancer Society 2011). The Human papillomavirus (HPV), a sexually transmitted infection usually from men, accounts for over 90% of all cervical cancer cases (Schiffman, 2007, and Castle, 2003). It is established that well-organized cervical screening programmes or widespread good quality cytology can reduce cervical cancer incidence and mortality (WHO/HPV, 2010).

An important reason for the sharply higher incidence of cervical cancer in developing countries is the lack of effective screening programmes to detect precancerous conditions and treat them before they progress to cancer (Alliance for Cervical Cancer Prevention, 2002). The concern here is what can make women go for screening? and will involving their spouse make any difference?

The 1994 International Conference on Population and Development recognised men as legitimate targets for sexual and reproductive health promotion. This recognition was born out of the experience of many health promoting agencies in the 1980s and 1990s who realised that without working with men, change would be very difficult or impossible. It was proposed that men should be involved because their active participation was crucial to the success of programmes and to the empowerment of women. Hence, the idea that men should play an active role in health promotion.

1.2 Statement of the Problem

Worldwide, the developing countries account for 80% of cervical cancer cases (Ferlay, Bray, Pisani, Parkin, and Globocan 2002). Nigeria is the most populous country in Sub-Saharan Africa, with a population of about 140 million people, of which 40.43 million are women from ages 15 years and older and are at risk of developing cervical cancer. The country life expectancy at birth is 50.6 years for Men and 52.6 years for Women. Currently estimates indicate that every year 14,550 women are diagnosed with cervical cancer and 9,659 die from the disease. Projected number of new cervical cancer cases in 2025 is 22,914 Projected number of cervical cancer deaths in 2025 is 15,251, (WHO/ICO HPV, 2010). Cervical cancer ranks as the 2nd most frequent cancer among women in Nigeria, and the 2nd most frequent cancer among women between 15 and 44 years of age. About 23.7% of women in the general population are estimated to harbour cervical cancer (WHO/ICO HPV, 2010).

In Nigeria cervical cancer has a prevalence rate of 24.6% which makes it second commonest to breast cancer which is 30.7% (Globocan, 2008). Cervical cancer is commonest in Northern Nigeria compared to the rest of Africa (Ngoma, 2006). Human Papilloma Virus (HPV) is the major causative agent. In Nigeria, HPV prevalence is high (greater than or equal to 15%) at all ages (Thomas, Henry, Omigbodun, Ojemakinde, Ajayi, Fawole, Oladapo, Smith, Arulan, Munoz, and Franceschi, 2004). In the developing

world Nigeria inclusive, screening services which is the only way the virus can be detected in an asymptomatic individual is poorly utilised. There is low proportion of women that are going for screening in the developing world as compared to the developed countries. In an estimate of screening coverage survey, Ibadan had just 1.2% who have done screening for cervical cancer, out of 254 women studied (Ajayi, 1998). This is related to the great disparity in prevalence of the disease between the developed and developing countries with 83,400 cases yearly in developed countries and 409,400 cases in developing countries (Ferlay *et al.*, 2002). In a study conducted to investigate the prevalence of abnormal cervical cytological findings and local risk factors in Ibadan. The prevalence of epithelial abnormalities in these women was 7.6%. (Thomas *et al.*, 2004)

1.3 Justification

Several studies have been carried out in Nigeria, and across Africa assessing women's knowledge, attitude, perceptions, determinants of cervical cancer screening *e.t.c.*, but there is limited studies that have taken into consideration the impact that men's knowledge, and attitudinal disposition to cervical cancer screening would have in influencing screening for cervical cancer among women around them. In Africa, the place of men cannot be over emphasised, as they play very important roles as significant others in the life of women especially their wives, and are mostly decision makers in the families. In recent years, many family planning and other reproductive health programmes have become interested in the topic of men and reproductive health. According to Nkumgala men in the first place, have decision-making powers in their different roles as husbands, fathers, political, traditional and religious leaders. The decision-making powers of men transcend all the spheres including health matters (Nkumgala, 2007). Men play key roles in supporting women's and children's health, preventing unwanted pregnancies, slowing the transmission of sexually transmitted infections, making pregnancy and delivery safer, reducing gender-based violence and also have distinctive reproductive health needs of their own (ICPD, 1994). In 2008, the Federal Government established a 5-Year Nigeria Cancer Control Plan, (2008 - 2013), on advocacy and awareness creation, cancer prevention, early detection through regular screening and cancer management. This study will provide information on how successful the implementation of the Cancer Control Plan has been since its establishment. This study will therefore be relevant in policy

making or adjustment, the findings can be incorporated in the health policy to come up with sustainable measures in ensuring adequate information/continuous education process on cervical cancer, not just for women but for men also. More so, the study will add to existing literature on male involvement in cervical cancer screening.

Knowledge and perceptions of an individual have great influence on his/her behaviours. Men who have adequate information on cervical cancer and its screening, will respond to it differently, from those who do not. It is expected that through this study evidence based data needed for appropriate health intervention programmes, will be generated.

1.4 Research Questions

- What is the level of men's knowledge on cervical cancer?
- What is the attitudinal disposition of men towards cervical cancer screening?
- What is the perception of men towards cervical cancer screening?
- How willing are men to support their wives to partake in cervical cancer screening?
- What are the factors that can enhance men's support for cervical cancer screening?

1.5 Objectives of the study

1.5.1 Broad Objective

The broad objective of this study was to investigate men's knowledge, attitudinal disposition and willingness of men to support cervical cancer screening

1.5.2 Specific Objectives

- To assess men's level of knowledge of cervical cancer screening
- To examine men's attitudinal disposition towards cervical cancer screening
- To examine men's perception about cervical cancer screening
- To assess men's willingness to support screening
- To identify factors that will enhance men's support for screening

1.6 Research Hypotheses (Null Hypotheses)

- There is no significant relationship between men's level of education and disposition to spouse's cervical cancer screening,
- There is no significant relationship between men's knowledge and attitudinal disposition to spouse's cervical cancer screening,
- There is no significant relationship between men's knowledge of screening and willingness to support spouse's for cervical cancer screening

1.7 Operational definition of terms

In this study, the operational definition of terms are as follows

- **Cervical cancer:** the form of cancer that occurs in the cervix of a woman
- **Men:** any male from ages 20-69.
- **Screening:** test conducted to detect traces of an infection even in an asymptomatic state.
- **Cervical cancer screening:** it is an examination of the cervix of a woman to detect any abnormalities in the cervix.
- **Occupational centres:** refers to medium and small scale enterprises which included: welding shops, barbing salons, mechanic shops etc.
- **STI's:** sexually transmitted infections, and they are contracted through sexual contact with an infected person.
- **STD's:** these refer to sexually transmitted disease which result from Sexually transmitted infections
- **High Risk:** The HPV strains of virus with higher tendencies of causing cervical cancer

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept of Cancer

Cancers arises from the transformation of a normal cell into a tumor cell in a multistage process, which is typically a progression from a pre-cancerous lesion to malignant tumors. These changes are as a result of the interaction between a person's genetic factors, and three categories of external agents, including: physical carcinogens, such as ultraviolet and ionizing radiation, chemical carcinogens, such as asbestos, components of tobacco smoke, aflatoxin (a food contaminant) and arsenic (a drinking water contaminant); biological carcinogens, such as infections from certain viruses, bacteria or parasites (WHO/Cancer, 2010). It is the most dreaded non-communicable disease in developing countries where it is invariably fatal due to lack of adequate preventive and curative services, unlike in developed countries which have policy, strategies and programmes for cancer prevention and management (WHO, 2002; Thun, 2010; Nnodu, 2010).

The body is made up of hundreds of millions of living cells. Normal body cells grow, divide, and die in an orderly fashion. During the early years of a person's life, normal cells divide faster to allow the person to grow. After the person becomes an adult, most cells divide only to replace worn-out or dying cells or to repair injuries. Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of out-of-control growth of abnormal cells. Cancer cell growth is different from normal cell growth (American Cancer Society 2010). Cervical cancer is the form of cancer that occurs in the cervix of a woman, that is the uterus of a woman.

2.1.1 Cancer of the Cervix

The cervix is the lower part of the uterus (womb). It is sometimes called the *uterine cervix*. The body of the uterus (the upper part) is where a baby grows. The cervix connects the body of the uterus to the vagina (birth canal). The part of the cervix closest to the body of the uterus is called the *endocervix*. The part next to the vagina is the *exocervix* or *ectocervix*. The 2 main types of cells covering the cervix are *squamous cells* (on the exocervix) and *glandular cells* (on the endocervix). The place where these

two cell types meet is called the *transformation zone*. Most cervical cancers start in the transformation zone (American Cancer Society, 2010).

Cervical cancer is the cancer that occurs in the cervix of a woman. Its symptoms include: abnormal vaginal bleeding between periods and after intercourse, any bleeding after menopause, continuous vaginal discharge, which may be pale, watery, pink, bloody, or foul-smelling, periods become heavier and last longer than usual, Back pain, fatigue, leaking of urine or feces from the vagina, Leg pain, Loss of appetite, Pelvic pain, single swollen leg, weight loss etc (Afox, 2009). The most affected of this disease are women between ages 45/50, and predisposing factors include, marriage type involved eg: Polygamy which increases the risk of the disease, parity etc. (Thomas *et.al.*, 2004)

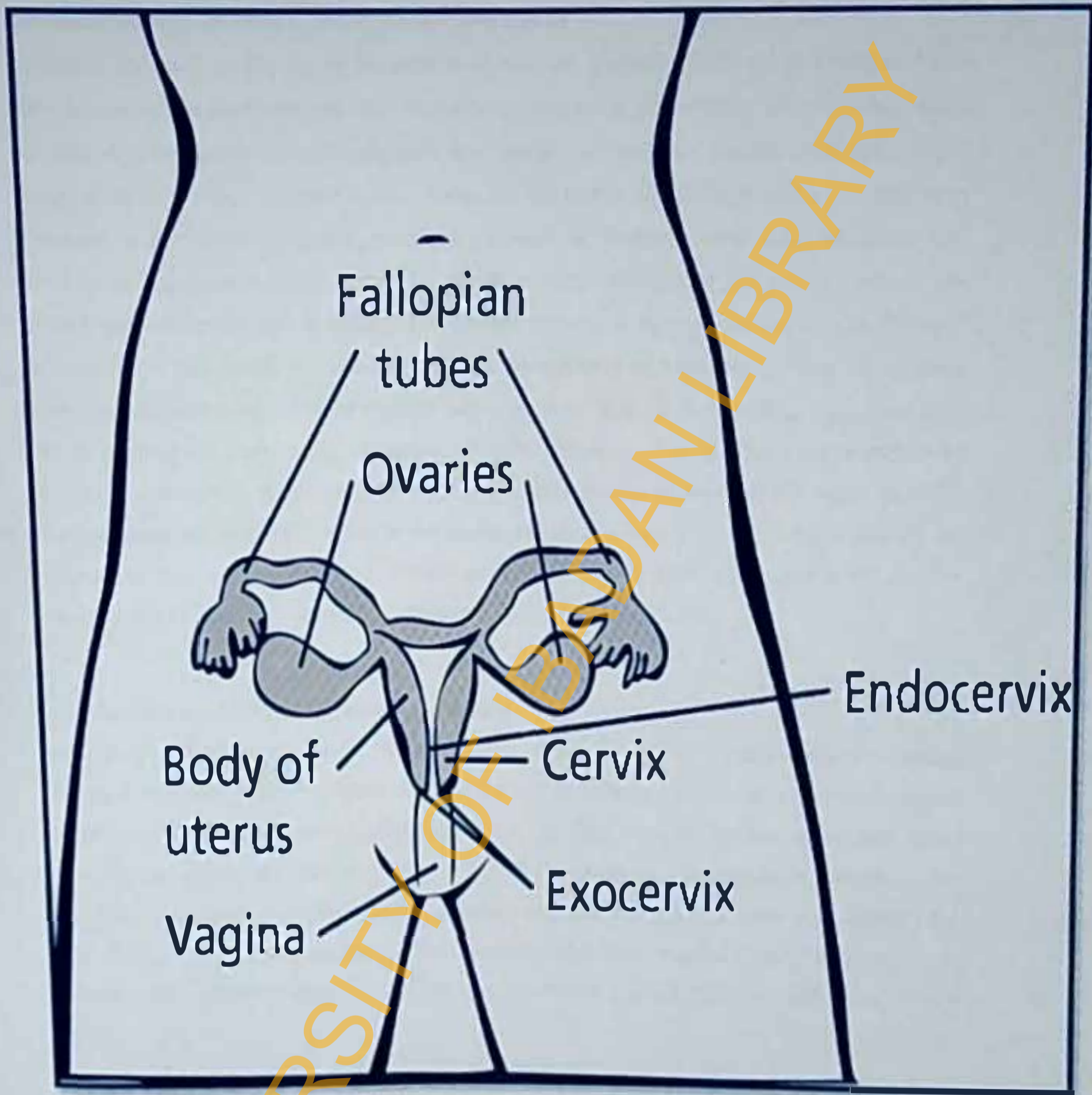


Figure 2.1: CERVIX (Source: American Cancer Society, 2010)

2.2 Incidence of Cervical Cancer Across the Globe

Evidence abounds of the rising incidence of cancers globally, 52% of this increase and 70% of cancer deaths emanates from developing countries where only 5% of global funds are available for cancer control and, very few human and material resources (Parkin, 2003; Publication of Union Against Cancer, 2006; Jones, 1999). Globally, it is the second most common cancer among women, with an estimate of 524,000 new cases in 1995, and developing countries account for 80%, (Parks, 2009). Cancer of the cervix uteri is the second most common cancer among women worldwide, with an estimated of 529,409 new cases and 274,883 deaths worldwide, in 2008. About 86% of the cases occur in developing countries, representing 13% of female cancers. It is one of the leading cancer among female cancers in developing countries (WHO/HPV/ICO, 2010). There were estimated 11 million new cancer diagnoses and 7 million cancer deaths throughout the world in 2002. Moreover, the number of new cases of cancer and deaths that occur due to the disease are expected to rise to 16 million and 10 million respectively by 2020 with close to 70% of the deaths in developing nations (UICC World Cancer Congress, 2006).

2.2.1 Incidence of Cervical Cancer in Africa

According to WHO 2008, in the WHO African region, 75,000 new cases were recorded in the same year and 50,000 women died of the disease. High incidences of cervical cancer are reported in Africa at rates exceeding 50 per 100,000 populations and age-standardized mortality sometimes exceeding 40 per 100,000 populations. For example, between 1981 and 1990, data from Nairobi hospital records showed that cervical cancer accounted for 70%-80% of all cancers of the genital tract and 8%-20% of all cancers. In Africa it is estimated that 53,000 women die of the disease every year (WHO Africa Region Report 2015).

2.2.2 Incidence of Cervical Cancer in Nigeria

According to Kolawole's study annually in Nigeria, there are about 100,000 new cancer cases in Nigeria. WHO (2008) estimates that incidence of cancer in Nigerian women by 2020 will be 100.9/100,000 and the death rates will be 76,000/100,000. There is a high burden of cervical cancer with mean age of patients of 52.4 years within the Federal Capital Territory, (FCT). Age at first confinement in affected women was between 12- 19 years, with an average age of 15 years and 86% of patients presenting late (Nnodu,

Erinosho, Jamda, Olaniyi, Adelaiye, Lawson, Odedina, Shuaibu, Odumuh, Isu, Imam, Owolabi, Yaqub, and Zaa, 2010). Estimates in Nigeria indicate that every year 14,550 women are diagnosed with cervical cancer and 9,659 die from the disease. Projected number of new cervical cancer cases in 2025 is 22,914. Projected number of cervical cancer deaths in 2025 is 15,251, (WHO/ICO HPV, 2010). People newly diagnosed with cancer yearly is 102,100. Age-standardised rate, incidence per 100,000 people yearly is 100.1. Risk of getting cancer before age 75 is 10.4%, with 71,600 people dying of cancer every year (IARC Globcan 2012).

According to a report from population-based cancer registries study in Nigeria, the age standardized incidence rate for all invasive cancers from the Ibadan Cancer Registry (IBCR) was 130.6 per 100,000 women. A total of 3,393 cancer cases were reported by the IBCR. Of these cases, 66% (2,238) was seen in females. Mean age of diagnosis of all cancers for women in Ibadan was 49.1. Breast and cervical cancer were the commonest cancers among women from registry records. Cervical cancer ASR at the IBCR was 36.0 per 100,000. (Jedy-Agba, Cumdo, Ogunbiyi, Oga, Fabowale, Igbinoba, Osubor, Otu, Kumai, Koechlin, Osunbi, Dkum, Blatter, and Adebayo, 2012)


Mortality from Cancer in Nigeria - Both Sexes, All Ages

Deaths: 53,064


8,454 (15.9%)  Breast


8,030 (15.1%)  Cervix uteri


5,098 (9.6%)  Prostate

4,672 (8.8%)  Liver

3,508 (6.6%)  Non-Hodgkin lymphoma

3,307 (6.2%)  Colon and rectum

2,416 (4.6%)  Kaposi sarcoma

1,330 (2.5%)  Ovary etc.

1,201 (2.3%)  Stomach

15,048 (28.4%)  Other cancers

GLOBOCAN 2002

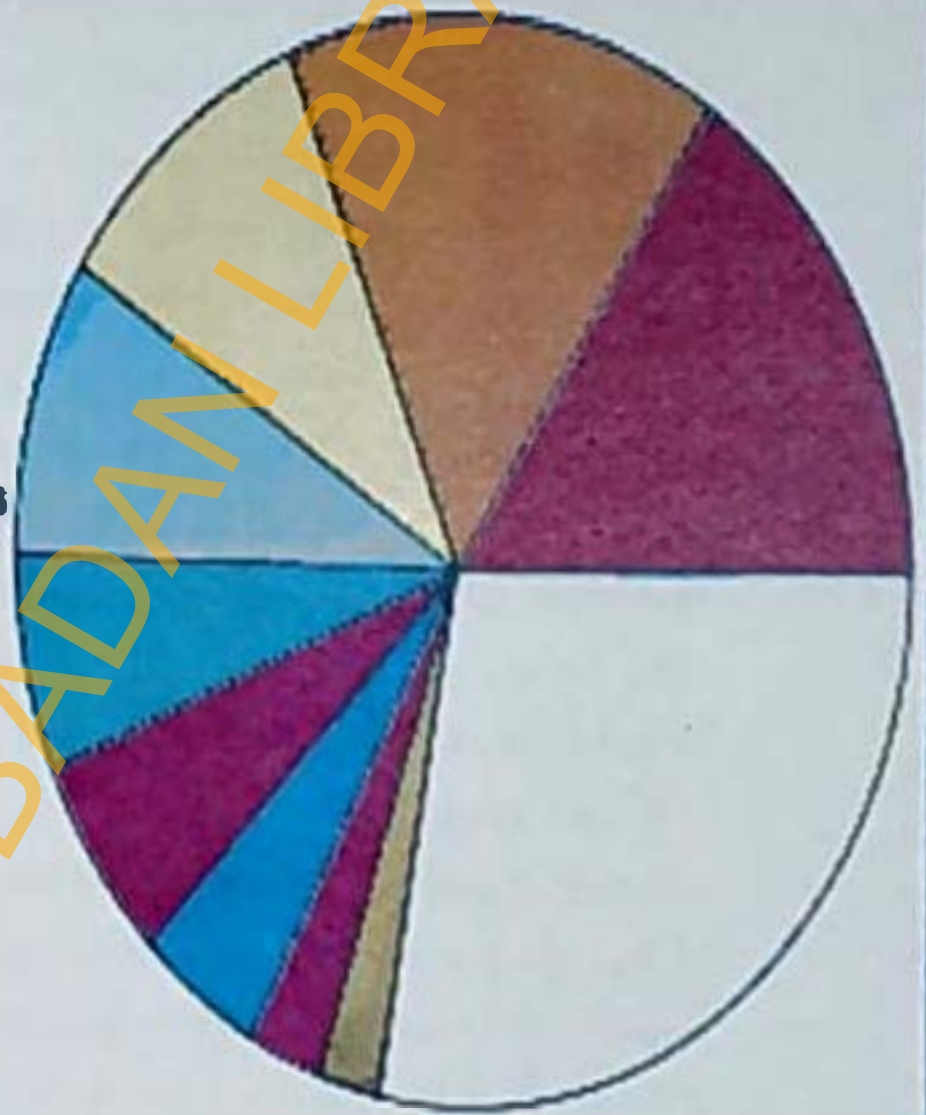


Figure 2.2: Mortality of cancers in Nigeria (Source: Globocan, 2008) mortality of cancers

2.3 Aetiology of Cervical Cancer

According to World Health Organization report (2002) and Nnodu 2010, the aetiology for many cancers are still unknown, however there are risk factors which are either modifiable or non-modifiable. The modifiable factors include: tobacco use, physical inactivity, unhealthy diet, obesity, ultraviolet radiation and infectious agents like Human Papilloma Virus (HPV), Hepatitis Viruses (HBV, HCV) and Helicobacter pylori. In a study conducted to investigate the prevalence of abnormal cervical cytological findings and local risk factors in Ibadan Nigeria, high parity and gravidity, lack of formal education were found significant risk factors (Thomas *et al.*, 2004). Although the implication of a sexually transmitted agent in the aetiology of cervical cancer has been suggested since the 1940's, most early studies focused on the analysis of female's sexual behavior and on the testing of female's biological samples, paying little attention to the potential contribution of men. However, as with any other STD, studies in couples should provide consistent evidence of the venereal nature of HPVs and one would expect higher rates of HPV infection and HPV-related diseases in women who had sexual contacts with promiscuous men than in women who had contacts with non-promiscuous men. Indeed, this was already reported more than 30 years ago by Pridan and colleagues who showed for the first time an association between the number of sexual partners of the husband and the risk of cervical cancer among mostly monogamous Jewish women. Since the women themselves may also have had multiple sexual partners, the evidence for a role of men in HPV transmission is more clearly shown in studies (Castellague, Bosch, and Muñoz, 2003).

Epidemiological studies also, in vaginal and Human Papillomavirus (HPV) negative women clearly indicate that sexual intercourse is virtually a necessary step for acquiring HPV as detected by HPV, DNA and serum antibodies testing. Genital HPVs are predominantly sexually transmitted. As with any other sexually transmitted infection (STI) men are implicated in the epidemiological chain of the infection. Acting both as "carriers" and "vectors" of oncogenic HPVs, male partners may be important contributors to the risk of developing cervical cancer in their female partners (Castellsegues *et al.*, 2003)

2.3.1 Human Papilloma Virus (HPV):

Human papilloma virus (HPV) has been established by several studies as a necessary cause of cervical cancer, and HPV prevalence is a major risk for cervical cancer in any

given population correlates. The primary underlying cause of cervical cancer is human papillomavirus (HPV), the most common sexually transmitted infection worldwide. HPV affects an estimated 50 percent to 80 percent of sexually active women at least once in their lifetimes. More than 50 known types of HPV can affect the genital area, of these 50 types, six account for almost 80 percent of cervical cancer cases. Certain types of HPV can cause abnormal cell changes, called dysplasia (WHO/HPV, 2010). Most mild cases regress or do not progress, particularly in women under age 35, when abnormalities persist over time and become severe, the cells develop into cancer cells. Certain types of HPV are called high-risk types because they are strongly linked to cancers, including cancer of the cervix, vulva, and vagina in women, penile cancer in men, and anal and oral cancer in both men and women. The high-risk types include HPV 16, HPV 18, HPV 31, HPV 33, and HPV 45, as well as some others. About two-thirds of all cervical cancers are caused by HPV 16 and 18 (WHO/HPV, 2010). Infection with HPV is common, and in most people the body is able to clear the infection on its own. However, sometimes the infection that remains or stays, and becomes chronic infection, especially when it is caused by the high-risk form of HPV, which eventually causes cervical cancers (WHO/HPV, 2010).

The prevalence of cervical infection with human papillomavirus (HPV), particularly of high-risk (HR) types that cause cervical cancer varies greatly worldwide (Munoz, Bosch, and de Sanjose, 2003).

An HPV prevalence that is high (greater than or equal to 15%) at all ages in Nigeria, and HRHPV 16 and 18 more prevalent in Ibadan, (Thomas *et al.*, 2004), is possibly related to the marital structure in Nigeria; a man often has multiple wives (National Institute Health Clinical Centre, 2011). Experimental, clinical, and epidemiological evidence strongly suggests that genital Human Papilloma viruses (HPVs) are predominantly sexually transmitted. Epidemiological studies in virginal and HPV-negative women clearly indicate that sexual intercourse is virtually a necessary step for acquiring HPV. As with any other sexually transmitted disease (STD) men are implicated in the epidemiological chain of the infection. Penile HPV are predominantly acquired through sexual contacts. Sexual contacts with women who are prostitutes play an important role in HPV transmission and in some populations sex workers may become an important reservoir of high risk HPVs. Acting both as "carriers" and "vectors" of oncogenic HPVs male partners may markedly contribute to the risk of developing cervical cancer in their female partners. Thus in the

absence of screening programs, a woman's risk of cervical cancer may depend less on her own sexual behavior than on that of her husband or other male partners. (Castellsagué *et al.*, 2003). According to W.H.O HPV report 2010, HPV 16 and 18 are the most prevalent in Nigeria and these are actually in the group of the high risk (HR) Human papilloma virus types.

2.3.2 Circumcision: A recent piece of evidence confirming the importance of men in HPV transmission and cervical carcinogenesis comes from the IARC multi-centric study on male circumcision. This study compared penile HPV DNA prevalence in circumcised and uncircumcised men to estimate a woman's risk of cervical HPV infection and that of cervical cancer according to the husband's circumcision status. They found that circumcised men were about three times less likely to harbour HPV in their penis than did uncircumcised men. Consistent with the venereal nature of HPV infections, they found that male circumcision also reduced the risk of both genital HPV infections and cervical cancer in the female partner. In this study monogamous women, circumcision status of the husband was associated with a reduced risk of cervical cancer (Castellsagué *et al.*, 2003).

2.3.3 Smoking: women who smoke are about twice as likely as non-smokers to get cervical cancer. Smoking exposes the body to many cancer-causing chemicals that affect organs other than the lungs. These harmful substances are absorbed through the lungs and carried in the bloodstream throughout the body. Tobacco by-products have been found in the cervical mucus of women who smoke. Researchers believe that these substances damage the DNA of the cervix cells and may contribute to the development of cervical cancer. Tobacco use is an underlying risk factor for 30% of cancers (ACS, 2010). Smoking also makes the immune system less effective in fighting HPV infections.

2.3.4 Immune suppression: human immunodeficiency virus (HIV), the virus that causes AIDS, damages the body's immune system and places women already infected with HIV at higher risk for HPV infections. This may explain the increased risk of cervical cancer for women with AIDS. Scientists believe that the immune system is important in destroying cancer cells and slowing their growth and spread. In women with HIV, a cervical pre-cancer might develop into an invasive cancer faster than it

normally would. Another group of women at risk of cervical cancer are women receiving drugs to suppress their immune response, such as those being treated for an autoimmune disease (in which the immune system sees the body's own tissues as foreign and attacks them, as it would to germ) or those who have had an organ transplant. (WHO, 2002, and ACS, 2010).

2.3.5 Diet: Women with diets low in fruits and vegetables may be at increased risk for cervical cancer. Also overweight women are more likely to develop adenocarcinomas of the cervix (A.C.S., 2010). Poor diet is associated with 20% of cancers. Health promotion should include increase consumption of fruits and vegetables, while reducing salt, food additives, fat and red meat consumption which may be risk factors for prostate, stomach and breast cancers (Jones, 1999.)

2.3.6 Poverty: Poverty is also a risk factor for cervical cancer. Many women with low incomes do not have ready access to adequate health care services, including Pap tests. This means they may not get screened or treated for cervical pre-cancers status (ACS, 2010). So many women would because of the cost of screening not go for it especially when the disease is asymptomatic.

2.3.7 Family history of cervical cancer: cervical cancer may run in some families. If your mother or sister had cervical cancer, your chances of developing the disease are 2 to 3 times higher than if no one in the family had it (American Cancer Society, 2010). Among others is prolonged use of oral contraceptives, etc.

Other risk factors

Reduced early onset of sex and number of partners will contribute to decreasing cancer of cervix (Kolawole, 2011). According to the study conducted Thomas and group 2004, in investigating the prevalence of abnormal cervical cytological findings and local risk factors in Ibadan, Nigeria. Of 1,104 sexually active women who consented to pelvic examination and cervical smears, results showed that women (mean age 39.8 years), Mean ages at menarche, first sexual intercourse and first pregnancy were 16.1, 20.3 and 20.7 years, respectively. According to the study risk factors in Ibadan included older age (mean 56.2 years), high parity and gravidity, lack of formal education and being divorced ($p < 0.05$).

2.4 Cervical Cancer Screening

Screening is defined as the systematic application of a test in an asymptomatic population. Cancers of cervix, breast and prostate are potentially curable if detected early, and adequately treated (WHO, 2002). Many women attending the general outpatient clinic at the University College Hospital had heard of cancer as a disease but however, very few of them have heard of it affecting the cervix (Ajayi and Adewole, 1998). Population dynamics are currently changing and an increase in middle aged population over the next 50 years will result in a 4fold increase in deaths due to cervical cancer in middle aged women. Acting now, with screening and vaccination, will reduce deaths in the middle and the end of this century. Approximately 50,000 deaths per year may be avoided in Sub-Saharan Africa (AfrOx, 2009). Nigeria is a low-resource country, health promotion should be done for general cancer prevention and cost-effective measures can be applied initially to at least two or three of the common preventable cancers as a pilot and later scaled up, while Cytology may continue in teaching hospitals (WHO, 2002; Jones, 1999). Screening for cervical cancer is among the most promising prevention possibilities. The objective of screening is aimed at detecting the abnormal cells at an early, less expensive and easily preventable stage, where cells can easily be prevented from becoming invasive cancer.

2.5 Cervical Cancer Screening types

2.5.1 Cervical Cytology: this is the branch of science that deals with the structure and function of cells. It also refers to tests to diagnose cancer and pre-cancer by looking at cells under the microscope. The Pap test (or Pap smear) is a procedure used to collect cells from the cervix for cervical cytology testing. The health care professional first places a speculum inside the vagina. The speculum is a metal or plastic instrument that keeps the vagina open so that the cervix can be seen clearly. Next, using a small spatula, a sample of cells and mucus is lightly scraped from the exo cervix (the surface of the cervix that is closest to the vagina). A small brush or a cotton-tipped swab is then inserted into the cervical opening to take a sample from the endo cervix (the inside part of the cervix that is closest to the body of the uterus). The cell samples are then prepared so that they can be examined under a microscope in the laboratory. There are 2 main ways that this is done the conventional and the liquid based Cytology (American Cancer

Society, 2010). As primary screening tests in the early detection of high-grade cervical neoplastic and HPV DNA testing the main purpose of the Pap test is to detect cancer or abnormal cells that may lead to cancer. It can also find non-cancerous conditions, such as infection and inflammation (National Institute for Health Clinical Centre, 2001).

2.5.2 Downstaging involves naked eye speculum examination of the uterine cervix (without acetic acid application) under adequate light by health workers who designate the findings as normal (test negative) or abnormal (test positive). Those with an abnormal finding need to be further investigated, which would entail cytology (in settings where limited cytology facilities are available) or examination by a gynecologist (where no cytology is available).

2.5.3 Visual Screening (VIA): It involves non-magnified visualisation of uterine cervix soaked with 3–5% acetic acid. It has been consistently demonstrated to have a sensitivity equivalent to that of cytological screening to detect high-grade lesions. Therefore, this test should be considered as a primary screening method in settings where quality cervical cytology is not available. However, the specificity is lower than that of cervical cytology (Union for International Cancer Control, 2000). The cervical cancer screening should be coordinated and emphasis should be shifted to using cheaper alternatives like Visual Inspection with Acetic acid (VIA) or Visual Inspection with Lugol's Iodine (VILI) for screening at community levels at high coverage (Kolawole, 2011).

2.5.4 Speculoscopy: This test involves visual examination, in a dark room, of the 3–5% acetic acid-impregnated cervix to detect aceto-white areas, with illumination provided by a chemiluminescent light source in the upper blade of the vaginal speculum. Sensitivity and specificity appear to be comparable to that of VIA. However, in view of the additional resources needed, it is an unlikely option as a primary screening test in developing countries (Union for International Cancer Control, 2000).

2.5.5 Cervicography: This test involves examination of magnified photographic documentation of the acetic acid-impregnated cervix. Sensitivity is lower than that of cytology and VIA to detect high-grade lesions, although specificity is comparable to that

of cytology. As a primary screening test, it is an unlikely option in developing countries. (Publication of Union for International Cancer Control, 2000).

2.5.6 HPV DNA testing: HPV DNA testing with molecular methods for the high-risk HPV types has been shown to have similar or higher sensitivity to detect high-grade disease than that of cytology. However, the specificity is lower than that of cervical cytology, as the prevalence of HPV DNA positivity in women without cervical neoplasia varies markedly and may be particularly high in young women. With reference to the alternate approaches worldwide interest in HPV testing is growing, both as an add-on to Pap smear screening and as a screening tool on its own (Union for International Cancer Control, 2000). The test's accuracy, objectivity, and its ability to produce consistent results make it a promising screening approach. HPV test holds promise as a screening tool. Studies suggest that the HPV test detects more true-positive pre-cancer cases among women in their 30s and 40s than the Pap smear and could potentially serve as a better primary screening method (Union for International Cancer Control, 2000).

2.6 Self-Collected Samples Approach

Self-collected vaginal samples are alternatives to clinician-collected cervical samples. This is an approach that allows women to collect specimen from their cervix themselves. Several recent studies show that women can successfully use vaginal tampons or swabs to collect their own cervical specimens for use in an HPV test. This could be advantageous in countries where cultural and programmatic barriers may limit the use of standard gynecological exams. A South African study evaluating the HC II test found self-collected cervical samples to be nearly as accurate as conventional Pap testing for detecting severe cervical disease in women ages 35 and older. Self-collection of cervical samples to work well, providers need to help women understand the optimal way to collect a sample (Alliance for Cervical Cancer Prevention, 2002).

2.7 The Poor Screening Status of Nigeria

An important reason for the sharply higher incidence of cervical cancer in developing countries is the lack of effective screening programs to detect precancerous conditions and treat them before they progress to cancer (Alliance for Cervical Cancer Prevention, 2010). Cervical cancer is preventable, but most women in poorer countries do not take

part in screening programmes. The following studies proves that screening status of Nigerian women is still very poor. Estimated coverage of cervical cancer screening in Nigeria in some regions is shown with Reference in the table below, Ago Iwoye, Ogun State amongst 278 women studied of ages between 20-63yrs, only 4.7% screened (Ogunbowale, 2008), in Benin City out of 184 women ages 24-60yrs studied 14.1% only have screened, (Gharoro, 2006), in Ibadan out of 254 women, only 1.2% have screened (Ajayi, 1998), In Kano of 230 women was 20.8%, (Kabir, 2005), Nnewi, Anambra State of 144 women only 5.7% have screened, (Udigwe, 2006).

Table 2.1: Screening coverage in Nigeria

Author	Location	Percentage screened
Ogunbowale 2008	278 women studied (Ago Iwoye)	4.7
Gharoro 2006	184 women (Benin city)	14.1
Ajayi 1998	254, women (Ibadan)	1.2
Kabir 2005	230 women (Kano)	20.8
Udigwe 2006	144 women (Nnewi Anambra State)	5.7

The coverage of screening is still very low, despite the increasing awareness. In most developed countries, women are advised to have their first Pap smear soon after becoming sexually active and to repeat the test every one to three years. But in developing countries, most women have never had a Pap smear (Alliance for Cervical Cancer Prevention, 2002).

2.8 Male Relevance in Reduction of the Burden of Cervical Cancer

Men's reproductive health directly affects the partner's reproductive health. Men also may serve as gatekeepers to women's access to reproductive health services. "Male involvement" in reproductive health and family planning programmes is not just promoting the use of male methods of contraception, but men's supportive roles in their

families. (Gaikwad *et al.*, 2012). According to the study by Kinanee and Ezekiel-Hart 2009, studying men as partners in maternal health and its implications for reproductive health counselling in Rivers State. They found that patriarchal practices have had so much negative consequence on maternal health in Nigeria, with special reference to Rivers State, as found in their study. They concluded that treating maternal health issues as a purely feminine matter without the involvement of men would make the battle against the high maternal and child mortality a lost one. Men have to be actively involved (Kinnee and Ezekiel-Hart 2009).

Only but a few studies confirm the relationship or significance of men's knowledge, and the burden of cervical cancer. In a study carried out on men's perception and knowledge of Human Papilloma Virus Infection and cervical cancer, the authors assessed young men's knowledge and perceptions of genital human papilloma virus (HPV) infection to identify factors that predict intention to make positive behavioral changes. The intention to reduce number of sex partners was associated with an understanding that HPV may have severe consequences for women, whereas intention to encourage female sex partners to undergo Pap smear screening was associated with increased general knowledge of HPV infection. It was then concluded that it is important to include men in HPV education and prevention efforts, especially within the context that HPV may lead to cervical cancer in female partners (Tara, McAnland, Bethany, Weaver, Shu-Kuang and Koutsky, 2005).

In a patriarchal culture with both men and women present, men tend to dominate the conversation, while women are silent. Furthermore, men tend to take charge and give orders, as opposed to engaging in shared decision making. In couples in health-care settings, the woman may be less willing to provide vital information to the health provider, becoming a passive participant in caring for her and her partner's health (Bonnie, 2003). There is need for more emphases to be placed on recognising men's role in female reproductive health issues. In the past, men's involvement has sometimes been ignored by advocates for women's health, who have the fear that adding these services will damage the quality of women's services and create additional competition for already scarce resources. However, adding programs for men can enhance rather than deplete existing programmes if the designers of these programmes carefully integrate them into the existing health care structure in a way that benefits both women and men.

The 1995 Fourth World Conference on Women in Beijing endorsed the incorporation of reproductive health services that include men, mandating that men's constructive roles be made part of the broader reproductive health agenda. In fact, neglecting to provide information and services for men can detract from women's overall health. For example, men who are educated about reproductive health issues are more likely to support their partners in decisions on contraceptive use and family planning, support that may be essential if women are to practice safe sex or avoid unwanted pregnancy. Moreover, if men are knowledgeable about reproductive health issues and can communicate about them with their partners, they are more likely to be supportive during pregnancy and may make better health care decisions: for example, by ensuring that their partner receives emergency obstetric services when needed, rather than delaying recourse to such care. The effect of men's attitudes and behavior on women's health is perhaps most obvious in regard to the pandemic of AIDS and other STDs. Programmes that educate, test and treat only one partner will not be effective in safeguarding the continued health of both. Men need to share the responsibility of disease prevention, as well as the risks and benefits of contraception (Guttmacher Institute, 1998).

According to a study carried out in Uganda to evaluate the efficacy of male partner involvement in reducing loss to follow-up among women in Uganda referred for colposcopy after a positive cervical cancer-screening test, male partner involvement significantly reduced loss to follow-up among women referred for colposcopy (Mutyaba, Mirembe, Sandin, and Weiderpass, 2009). Hence the need for involvement of young men in knowledge empowerment eg. awareness of reproductive health for male and female.

3.9 Multiple Sexual Partnering Nature of African Men and the Spread of HPV

The current understanding is that men who have had multiple sexual partners or who are carriers of HPV DNA may be vectors of high-risk HPV types, placing their sexual partners at a high risk of cervical cancer. The key question though is how men acquire the virus in the penis in the first place. It is now well established that penile HPVs are predominantly acquired through sexual contacts. Sexual contacts with prostitutes play an important role in HPV transmission and sex workers may be an important population reservoir of high risk HPVs. Through sexual intercourse with high-risk women, HPVs enter the penis which can then be transmitted to the current stable partner or to subsequent sexual partners. Men

are thus the vectors of oncogenic HPV types that are usually found in cervical carcinomas. (Castellsagué, Bosch, Muñoz, and Meijer, 2002). In Nigeria, multiple sexual partners is allowed as men are free to marry and keep outside marriage as many women as they can. This in turn poses the wife of such an infected man, several other women he may have had sexual contact with to the risk of contracting the Human papilloma virus, and hence increasing the spread.

2.10 Government Policies Statement on Cervical Cancer Prevention

Over the years, several health policies have been put down which include the, National health policies (NHP) 2004. According to NHP section 6.9 Reproductive Health, objective 7 and 8 it states thus:

- Reduce the incidence and prevalence of reproductive cancers and other non-communicable diseases.

The major thrusts for achieving the goals and objectives of the National Reproductive Health Policies are:-

1. Advocacy and Social Mobilization to establish the support of policy and decision makers, community members and organisers of Reproductive Health issues
2. Promotion of Healthy Reproductive Health lifestyle by process of appropriate knowledge to bring about appropriate behavioural change and improve participation in the use of RH services.
3. Equitable Access to Quality RH Services to assure availability of RH issues in the community.
4. Capacity Building by updating knowledge and skills of healthcare providers and ensuring availability of appropriate materials for effective RH services.
5. Research Promotion to be undertaken to provide information for employing new methods of addressing emerging.

Also, there is the Nigeria Cancer Control Plan, (2008 – 2013). The Federal Government in 2008 established a 5-Year Nigeria Cancer Control Plan, (2008 – 2013), which focuses on advocacy, awareness creation, cancer prevention, early detection through regular screening and cancer management.

Despite the existence of these policies, there is concern regarding effort put into implementation of the policies. Nigerian Government has not done much to justify the

existing policy statements. Some non-governmental organisations and CBO's in the country are involved in awareness creation and advocacy in the communities, in the media, in market places, and churches. On the international scene there are International NGO's such as the World Health Organisation, Union for International Cancer Control, and International network for cancer treatment and research, to mention a few, who are directly or indirectly supporting the Nigeria on health issues and still willing to do more. However, no matter how much funding support is being expected from the foreign agencies, we as a nation should be sincerely willing to set the pace, before others can follow.

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2.11 Conceptual Framework

PRECEDE Model

The PRECEDE stands for Predisposing, Reinforcing, Enabling Constructs in Educational/Environmental Diagnosis and Evaluation. Developed in the 1970s, this component of the model posits that an educational diagnosis is needed to design a health promotion intervention (Green and Kreuter, 1991) just as medical diagnosis is needed for a treatment plan. According to this model, three types of factors influence behavior and the state of these three factors determined the behavioural outcomes of individuals. These factors are predisposing, enabling and reinforcing factors.

Relevance of the framework to this study

This model is relevant to this study in that men support for cervical cancer screening, was as a result of the situations of the following predisposing, enabling and reinforcing factors stated below. These gave guide to addressing the research questions.

Predisposing factors: These are factors that offer explanations for the occurrence of a particular behavior. They can also be referred to as rational for a particular behavior. In this study the predisposing factors include level of men's knowledge on cervical cancer and screening, attitudinal disposition, perception towards cervical screening, belief about cervical cancer and screening, values associated with screening. These facilitate the motivation for support towards screening among men and helped in framing some questions.

Enabling factors: They are factors that can motivate behavior. They are important factors relating to resources such as time, facilities, financial resources, as well as policy support, level of education. An assessment of how these factors can influence the men support for cervical cancer screening was carried out in this study.

Reinforcing factors: This addresses what and from where have men gotten information on cervical cancer screening, the impact of mass communication and social support and significant others. Within the context of this study, the significant others include persons such as peers, friends, neighbours, etc. which have potential for influencing men's level of support for screening.

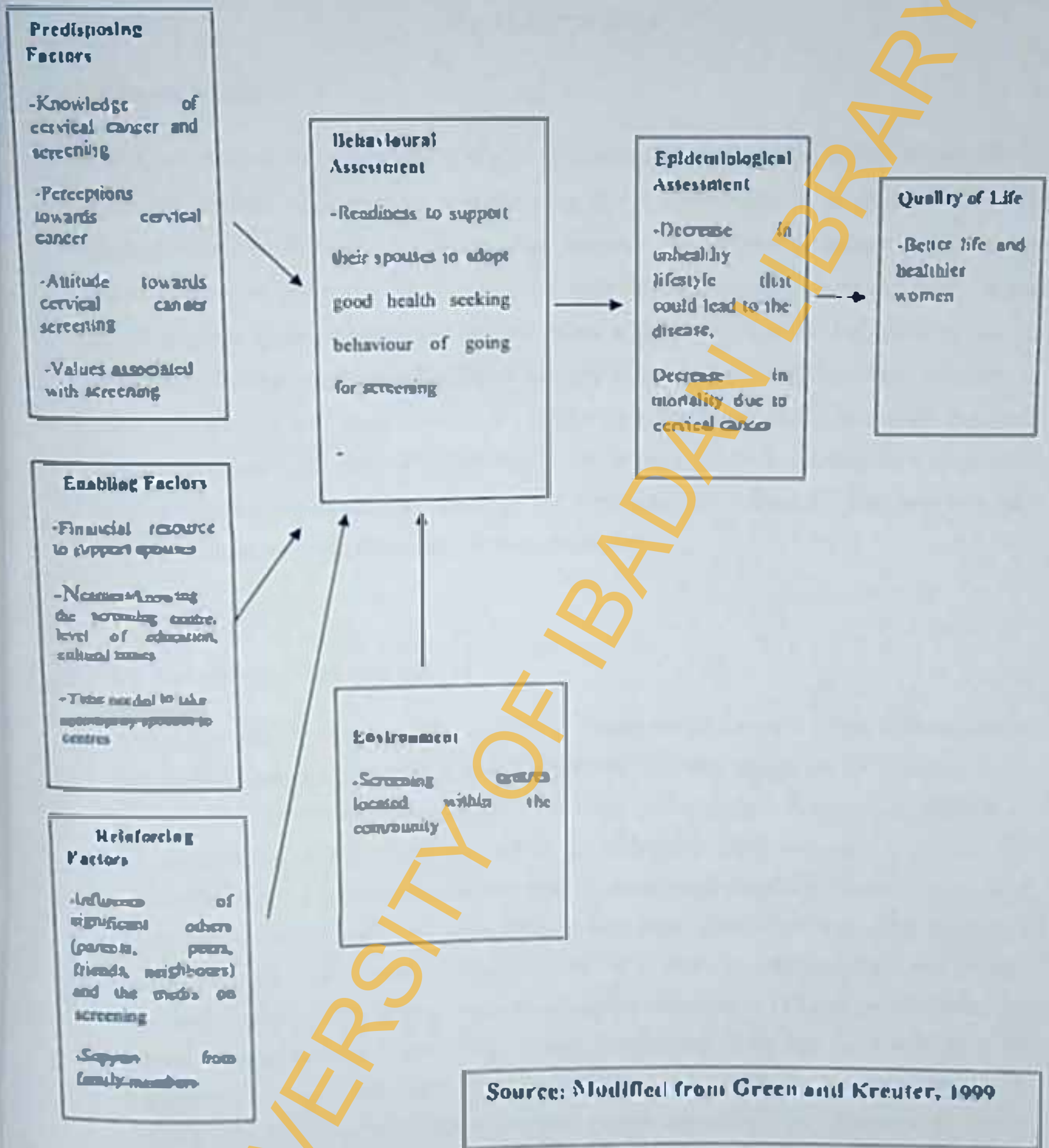
Behavioural Assessment: this addressed men's willingness or unwillingness to support their spouses which was based on the predisposing, enabling and reinforcing factors.

Epidemiological Assessment: decrease in unhealthy lifestyle that could lead to the disease, decrease in mortality due to cervical cancer resulting from increased level of support.

Quality of Life: A decrease in cervical cancer cases and a better life and healthier women in the communities.

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Figure 2.3 Precede Model



CHAPTER THREE

METHODOLOGY

3.1 Study Design

It is a descriptive cross sectional study. A descriptive study is one in which information is collected without changing or manipulating the environment. It assists to study the characteristics of a given population, demonstrate associations or relationship between characteristics of the group, as they interact with the environment. With this study design the population characteristics are known, how, when, and why the behaviour occurred. This study design provides information about the occurring health behavior, attitudes or other characteristics of men which is the particular group under study. Basically, the study focused on knowledge and attitudinal disposition of men to cervical cancer screening, their willingness to support their wives to go for screening and factors that can enhance their support in Ibadan North East Local Government Area.

3.2 Description of Study Area

Ibadan city has a land area of 445 – 455km². Ibadan North East is a Local Government in Ibadan. Ibadan North East was founded during the Military regime on 27th August, 1991. It was carved out of the defunct Ibadan Municipal Government and derived its name from the metropolitan nature of the area of about 12.5square kilometers that it covers. The Ibadan North East Local Government Area is mostly inhabited by Yorubas, but still a heterogeneous community, accommodating people from other tribes who either engage in commercial activities or work in the public service. It has a population of 331,444 people. The male made up of 163,844, while the female population is 167,600 people (National Population Commission, 2006). This Local Government Area has 12 wards with 44 communities in it. There are 47 public and private health facilities in the Local Government Area, but none offers cervical cancer screening (Oyo Ministry of Health 2014). Ibadan North-East and Ibadan North-West Local Government Areas forms largely the traditional core areas of the city. This situation necessitates the residents living in Ibadan North-East Local Government Areas to travel longer distance to utilise specialised health facilities (Wojunle, and Fadare, 2014).

3.3 Study Population

The study population were men of marriageable age of 20-69, who reside and work in Ibadan North East Local Government.

3.4 Inclusion Criteria

- The respondents consisted of men aged 20-69 years,
- The respondents were residents who also work in IBNELGA during the period of the study,
- Eligible individuals that gave their informed consent in IBNELGA.

3.5 Exclusion Criterion

- Anyone who declined consent.

3.6 Sample Size Calculation

The minimal sample size was calculated using the Leslie Kish formula

$$N = \frac{Z^2 pq}{d^2}$$

Where

Z set at 1.96 .

P as 24.6% = 0.246 (Globocan / WHO report, 2008)

q = 1 - p = 1 - 0.246 = 0.75,

d = set at 0.05 (95% confidence interval),

$$\text{Therefore } N = \frac{(1.96)^2 \times 0.246 \times 0.75}{(0.05)^2}$$

$$\frac{3.84 \times 0.1845}{(0.05)^2}$$

$$0.7066 / 0.0025 = 282.64 = 283 + 29 (10\%) \text{ non response rate} = 312$$

Sample size therefore = 312 participants present at time of interview

3.7 Wards in Ibadan North-East Local Government

IBNELGA has 12 wards and 44 communities which are listed below:

Table 3.1: Wards and Communities

WARD	AREA
1	Odo Osun, Labiran
2	Ogbori Efon, Ita Baale, Oronyan, Beyerunka
3	Kosodo, Labo, Alafan
4	Adekile, Aremo, Orita Aperi
5	Labiran, Aderogba
6	Oje -Aderogba, Alafara
7	Oke Opa, Atipe, Oja Igbo, Aremo Alafan, Ajegede
8	Ode Aje, Padi, Alase, Aremo Ajibola
9	Koloko, Agugu, Oke Ibadan, Idi-Obi
10	Oje Irefin, Ita Akinloye, Babo Sale
11	Iwo Road, Abayomi, Basoran, Idi Ape BCOS Quarters
12	Parts of Irefin, Agodi Oate, Oluyoro, Gbenla, Oke Adu, Aromolamn, Onipepeye.

(Source: IBNELGA)

3.8 Sampling Technique

A multi-stage sampling procedure was used to select the appropriate sample population as follows:

Stage 1: Simple random sampling using balloting system was employed to select IBNLGA out of five Local Government in Ibadan Metropolis.

Stage 2: Simple random sampling involving the balloting system was used to select 4 wards out of the 12 wards in the LGA.

Table 3.2: Randomly selected wards in Ibadan North-East Local Government

Ward	Communities	No of communities
2	Ogboni Efon, In Baile, Oranyan, Beycrunka	4
5	Labiran, Aderogba	2
6	Ojo -Aderogba, Alafam	2
12	Parts of Irelin, Agodi Oato, Oluyoro, Gbenla, Oke Adu, Aromolaran, Onipereye	7

Stage 3: Proportionate sampling was used to select communities from wards according to the number of communities in each.

Table 3.3: Proportionately sampled communities

Ward/no of communities	Proportion No. of communities in ward /total no of comm. In all wards (15) x 4 wards	No of communities selected
2(4)	$4/15 \times 4$	1.06 approx 1 community
5(2)	$2/15 \times 4$	0.53 approx 1 community
6(3)	$3/15 \times 4$	0.8 approx 1 community
12(7)	$7/15 \times 4$	1.86 approx 2 communities

Stage 4: Simple random sampling with balloting system was again used to select the particular number of communities to work with from each ward, which was as follows:

ward 2, 5, 6 and 12 in a ratio of

1:1 :1:2 as calculated in the table above.

Table 3.4: Ratio of selected wards

Ward	Communities randomly selected	Population of men (NPC, 1991)
2	Ita-Baale	2,698
5	Labiran	1,462
6	Alafaro	2,410
12	Agodi gate	4,363
12	Oluyoro	4,280
Total population of men in selected communities		15,486

Stage 5: Projected population of men ages 20-69, and a projection to 2012 on a growth rate of 3.28 % (NPC, 2006) using the population projection estimation formula

$$N_t = N_0 e^{RT}$$

Where N_t = future Population, N_0 = Initial Population, e = exponential = 2.71, R = growth rate = 3.28, T = no of years = 20.

Table 3.5 Projected population

Ward	Communities randomly selected	No of adult men aged 20-69 (80% of entire male population-NPC 1991)	Projected to 2012 on (3.28% increase)
2	Ita-Boale	2,158	4,143
5	Labiran	1,170	2,246
6	Alafan	1,928	3,702
12	Agodi gate	3,490	6,701
12	Oluyoro	3,424	6,571
	Total	12,270	23,366

Stage 6: Proportionate sampling was again used to calculate number of men from each community. This was calculated as follows: number men in community /total sample size x 100.

Table 3.6 Sample of men in communities

Ward	Communities randomly selected	Proportion Pop. of comm. men/total population of men in all comm x Total sample size	Sample/communi ty
2	Ita-Baale	$4,143/23,366 \times 312$	55
5	Labirao	$2,246/23,366 \times 312$	29
6	Alafara	$3,702/23,366 \times 312$	50
12	Agodi gate	$6,701/23,366 \times 312$	89
12	Oluoyo	$6,574/23,366 \times 312$	87
	Total		312

Table 3.7: Number of men recruited from occupational centres

Ward	Occupational centers in selected communities	No of men recruited from workplaces in the communities
2	Occupational centers in Ita-Baale	55
5	Occupational centers Labiran	29
6	Occupational centers Alafara	50
12	Occupational centres Agodi gate	89
12	Occupational centres Oluyoro	87
	Total	312

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Stage 7: Purposive sampling method was employed to select participants from occupational centres located in communities within the wards. These work centres include mechanic shops, barbing salons e.t.c. which were usually located in front of the houses of respondents. Participants were visited at various work sites between the hours of 9am-5pm. Those who were eligible for the study and gave informed consent were then recruited into the study.

3.9 Instruments for Data Collection

Qualitative data Instrument involved the use of Focus Group Discussion Guide. The first section was the introduction of researcher, respondents and purpose of the gathering, then followed by questions on Guide. There were eleven set of developed questions with follow up questions which focused on sexually transmitted infections, knowledge of cervical cancer screening, attitudinal disposition and perception towards cervical cancer screening, willingness to support screening and factors that will enhance men's support for screening etc.

Quantitative data instrument involved the use of pre-tested interviewer administered questionnaire which consisted of six sections. The first section was on socio-demographic characteristics, second on knowledge assessment with 10 questions, with 2 points assigned to each, third and fourth section on attitudinal disposition with 8 question having 2 points assigned, and perception respectively which was reported in percentages, the fifth section on assessment of men's willingness to support screening had 7 questions with 2 point assigned to each of the questions, sixth section on identifying factors that will enhance men's support for spouses screening, which was measured in percentages. The following scale was developed: a 20-point knowledge, 16-point attitudinal, and 10-point willingness scales was used for grading. Respondents knowledge scores < 10 and ≥ 10 points were classified as poor and good respectively. Similarly attitudinal scores ≤ 8 and > 8 points were categorized as negative and positive. Willingness score of < 7 and ≥ 7 points regarded as unwilling and willing.

3.10 Validity of Instrument

The research instrument was set up in line with the research questions, objectives of study and reviewed literatures. The questionnaire was subjected to review and corrections by my supervisors and other professionals. After approval of the instrument, there was translation, and back translation of the instrument (English-Yoruba, and Yoruba-English) in order to ensure the appropriate meaning and interpretation of the questions items.

3.11 Reliability of Instruments

To ensure reliability, 10% of the sample size of the instruments was pre-tested in Yemetu community in July 2012. This community is similar in characteristics with the communities under study. To confirm the reliability of the instrument, analysis of the pre-test data was done using Cronbach's Alpha correlation coefficient of the Statistical Package for Social Science (SPSS). Cronbach's Alpha is a model of internal consistency, based on the average inter-item correlation. According to this approach, a result showing correlation coefficient closer to 1 is said to be more reliable (Solademi, 2011). However, Cronbach alpha of 0.75 confirmed the reliability of this study instrument. The pre-test result was also useful in determining the trend in the responses of respondents, their level of understanding of the items in the research instruments, the duration required to administer the instruments, and also served as an eye opener for further questions that need to be included or removed from the instruments.

3.12 Recruitment and Training of Research Assistants

Two research assistants were recruited in this study. They were given prior training on how to collect the necessary data, before commencement of the fieldwork.

3.13 Data Collection Procedure

Qualitative data collection procedure: Four Focus Group Discussion (FGD) was conducted in each of the four randomly selected wards (2, 5, 6, 12). The FGD session was basically work place based, reason is that at the time this study was being carried out most men of in the category under study who were active were at work. The leader

in charge of the work or market place was approached and the purpose of study explained to him. He gave permission and help to bring other men together for the session. After forming a group they were informed on the purpose of the gathering. A secretary was usually chosen to record the activity in the group discussion. After introductions, the discussions began. Discussion and responses were recorded with a device to enable accurate report of responses.

Quantitative data collection procedure: There were two (2) trained female research assistants who helped in the administration of the questionnaire, in the selected communities. The investigator and the research assistants moved from one ward to another to interview men eligible for study. The data collection was carried out in two weeks, in August 2012. The questionnaires were administered from 9 am to 5 pm daily. Only respondents who gave their consent were interviewed using the questionnaire. The research assistants were of Yoruba speaking origin, this enabled them to interview respondents who could not understand English in Yoruba. Eligible men at different work places were approached and purpose of study was introduced, after consenting to be part of the study the questionnaires section followed, which was used to obtain information on: first socioeconomic background, age, gender, socio economic status. Then the second section of the questionnaire included questions in four sections on knowledge, disposition and willingness to support cervical cancer screening, and factors that will enhance men's support for screening.

3.14 Data Management/Analysis

The following processes were adopted to ensure proper management of data:

- A manual of field operations was prepared to spell out exactly how entries were made
- Serial numbers were given to all questionnaires for easy identification, and recall of any instrument.
- The instrument was kept safely, and stored in a well sealed Polythene bag to prevent water from reaching and touching it.
- Administered questionnaire were edited on daily basis.

- Analysis was done using statistical package social scientist (SPSS) 16.0 Version, at 5% level of significance.
- Findings were summarised and presented in tables and charts for better comprehension.
- The FGD sections were conducted in a suitable environment, recorded on audio tapes, transcribed and analyzed using thematic approach.
- Copies of the records obtained from the tape was kept safely.
- The data were analysed using both Chi-square test, and logistics regression (inferential statistics) and tables and chart (descriptive statistics) were used to present data.

3.15 Ethical Considerations

Ethical approval was obtained from the Oyo State ethics review committee. Before the interview sessions, informed consent was obtained from participants, they were given orientation on the objectives, and purpose of the study. The following ethical principles were followed in handling research participants:

- The principle of respect for persons,
- The principle of justice,
- Principle of confidentiality,
- Rights to voluntary participation in the research.

3.16 Limitation of Study

A major limitation in this work was lack of time to work with, limited resources, also language barrier as the research student is not of Yoruba origin but this was taken care of by recruiting Yoruba speaking research assistants.

CHAPTER FOUR RESULTS

4.1. Socio demographic characteristics of respondents

Mean age for adult men was 35.9 ± 9.7 years. Few (24.0%) number of the respondent had not greater than primary education, 59.9% had secondary education, while 16.1% attended higher institution. Most (79.3%), respondents were married/ever married and 20.4% were single. Almost all (94.1%), of the respondents were Yoruba and 4.9% were Igbo. The respondents consisted of 62.8% Muslims and 36.2% Christians. More (80.1%) have monogamy marriage type, while 19.9% are polygamist. 12.8% were salaries earners employed by government establishments, 78.0% were self employed traders and artisans.

Table 4.1: Socio-demographic characteristics of respondents

Variable	Frequency	%
Age in years		
<30	81	26.6
30-39	119	39.2
40-49	72	23.7
50+	32	10.5
Level of Education		
Not greater than Primary	66	24.6
Secondary	182	60.0
Tertiary	49	16.1
No response	7.0	2.3
Ethnicity		
Igbo	15	4.1
Yoruba	286	94.1
No response	3	1.8
Marital Status		
Married/ever married	242	79.6
Single	62	20.4
Religion		
Christian	110	36.2
Muslim	191	62.8
No response	3	1.0
Marriage type		
Monogamy	193	63.5
Polygamy	48	15.7
No response	1	0.3
Not applicable	62	20.4
Occupation		
Employed	39	12.8
Self employed	237	78.0
Unemployed	28	9.2

4.2: Knowledge of cervical cancer

The focus group discussion revealed that most participants have never heard of cervical cancer before, while some referred to cervical cancer as breast cancer and some said cervical cancer is "Atosi egbe ni ooo" (in English translation means diabetes).

Some said: *na the disease wey dey worry women for breast*, (in English translation means it is a disease that occurs in the breast of women). Another said *na very deadly disease wey dey kill women well, and na breast e dey happen. even self I know somebody wey e just kill* (in English translation means it a very deadly diseases that occurs in the breast of womco and that he knows someone who just died of the disease). The responses above reveal that these men did not know what exactly cervical cancer is, as they refer to cervical cancer as breast cancer.

Discussants did not know how to identify when their spouses have symptoms that suggest abnormality in the cervix, most of the discussants did not know the risk factors. Many participants said that *only promiscuous women are the ones at risk, some said their wives are faithful to them hence, she cannot have the human papilloma virus infection*. Some participants also said that even when they keep extra marital affairs that they ensure the use of condoms, while some say they take drugs to prevent infections. Many participants said they cannot send their spouse for screening except they notice signs and symptoms in her, because they really do not know what cervical cancer is, but if they have knowledge it will help them support screening.

Who can have cervical cancer?

Many participants said that *only promiscuous women are the ones at risk, some said their wives are faithful to them hence she cannot have the human pillonia virus infection. They made statements like: "my wife can never have it. she dey kampe with only me-so she no fit get am"*.

How can you prevent Cervical cancer?

Some participants said that *even when I carry woman apart from my wife, I make sure I use condoms*, while some said *they take drugs to prevent infections*.

What role does screening play?

"Na testing go help you know whether you get disease or not" meaning it is through screening you can know how healthy you are.

Where can one get screened?

A moo..... which means we don't know

When can you send your spouse for screening?

Most participants said they cannot send their spouse for screening except they notice signs and symptoms in her, because they really do not know what the diseases is all about.

Many respondent expressed interest in knowing about the disease.

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4.2.1 Frequency distribution of respondents' knowledge on cervical cancers screening

From the set of knowledge questions asked frequency distribution response was as follows: Mean knowledge score on cervical cancer screening was 35.7 ± 5.0 . Cervical cancer is a disease that can affect: any woman 112 (36.8%), teenage girls 11 (3.6%), spinsters 15 (4.9%), don't know 166 (54.7%). The disease cervical cancer is caused by: virus 115 (37.80%), flies 9 (3.0%), mosquitoes 10 (3.3%), don't know 167 (54.9%). What is the best way to prevent cervical cancer: bathing just after sex 13 (4.3%), screening for the disease 128 (42.1%), drinking much water before sex 3 (1.0%), don't know 160 (52.6%). Early detection through screening can: kill someone 17 (5.6%), makes treatment easier 147 (48.4%), increases infection 5 (1.6%), Don't know 135 (44.4%). Screening is only for: married women 21 (6.9%), every sexually active woman 127 (41.8%), promiscuous women 32 (10.5%), don't know 124 (40.8%). Screening becomes necessary if the woman is: diabetic 22 (7.2%), hypertensive 25 (8.2%), none of the above 82 (27.0%), don't know 173 (56.9%), no response 2 (0.7%). Which of the following is not a form of cervical cancer screening: visual inspection with acetic acid 29 (9.5%), pap smear test 13 (4.3%), blood sugar test 31 (10.2%), don't know 225 (74.0%). Men who know 1 risk factor 9 (3.0%), 2 Risk factor 5 (1.6%), don't know any 290 (95.1%). Only (1.4%) respondents had knowledge of symptoms, 4.6% had knowledge of risk factors. Knowledge of respondents on the overall was poor (78.6%).

Table 4.2: Respondents' knowledge on cervical cancers screening

STATEMENT	Frequency N(%)
Cervical cancer is a disease that can affect	
Any Woman	112 (36.8)
Teenage girls	11(3.6)
Spinsters	15(4.9)
Don't know	166(54.7)
Total	304(100)
The disease cervical cancer is caused by	
Virus	115 (37.80)
Flies	9 (3.0)
Mosquitoes	10 (3.3)
Don't know	167 (54.9)
No response	3 (1.0)
Total	304 (100)
What is the best way to prevent cervical cancer	
Bathing just after sex	13 (4.3)
Screening for the Disease	128 (42.1)
Drinking much water before sex	3 (1.0)
Don't know	160 (52.6)
Total	304(100)
Early detection through screening can	
Kill someone	17 (5.6)
Makes treatment easier	147 (48.4)
Increases infection	5 (1.6)
Don't know	135 (44.4)
Total	304 (100)
Screening is only for	
Married women	21 (6.9)
Every sexually active woman	127 (41.8)
Promiscuous women	32 (10.5)
Don't know	124 (40.8)
Total	304 (100)

Screening becomes necessary if the woman is	
Diabetic	
Hypertensive	22 (7.2)
None of the above	25 (8.2)
Don't know	82 (27.0)
No response	173 (56.9)
Total	2 (0.7)
	304 (100)

Which of the following is not a form of cervical cancer screening	
Visual inspection with acetic acid	29 (9.5)
Pap smear test	13 (4.3)
Blood sugar test	31 (10.2)
Don't know	225 (74.0)
No response	6 (2.0)
Total	304

State 2 symptoms of cervical cancer	
Knows 1 symptom	4 (1.3)
Knows 2 symptoms	0 (0)
Don't know any	298 (98.7)
Total	304 (100)
2 risk factors of cervical cancer	
1 risk factor	9 (3.0)
2 risk factor	5 (1.6)
3 I don't know any	290 (95.1)
Total	304 (100)

Knowledge assessment scale was a 20 point scale, with 2 points assigned to each question. respondents knowledge scores <10 and ≥ 10 points were classified as Poor and Good respectively. After individual grading and categorisation, the following resulted:

Poor knowledge	78.6%
Good knowledge	21.4%

Percentages of the respondents

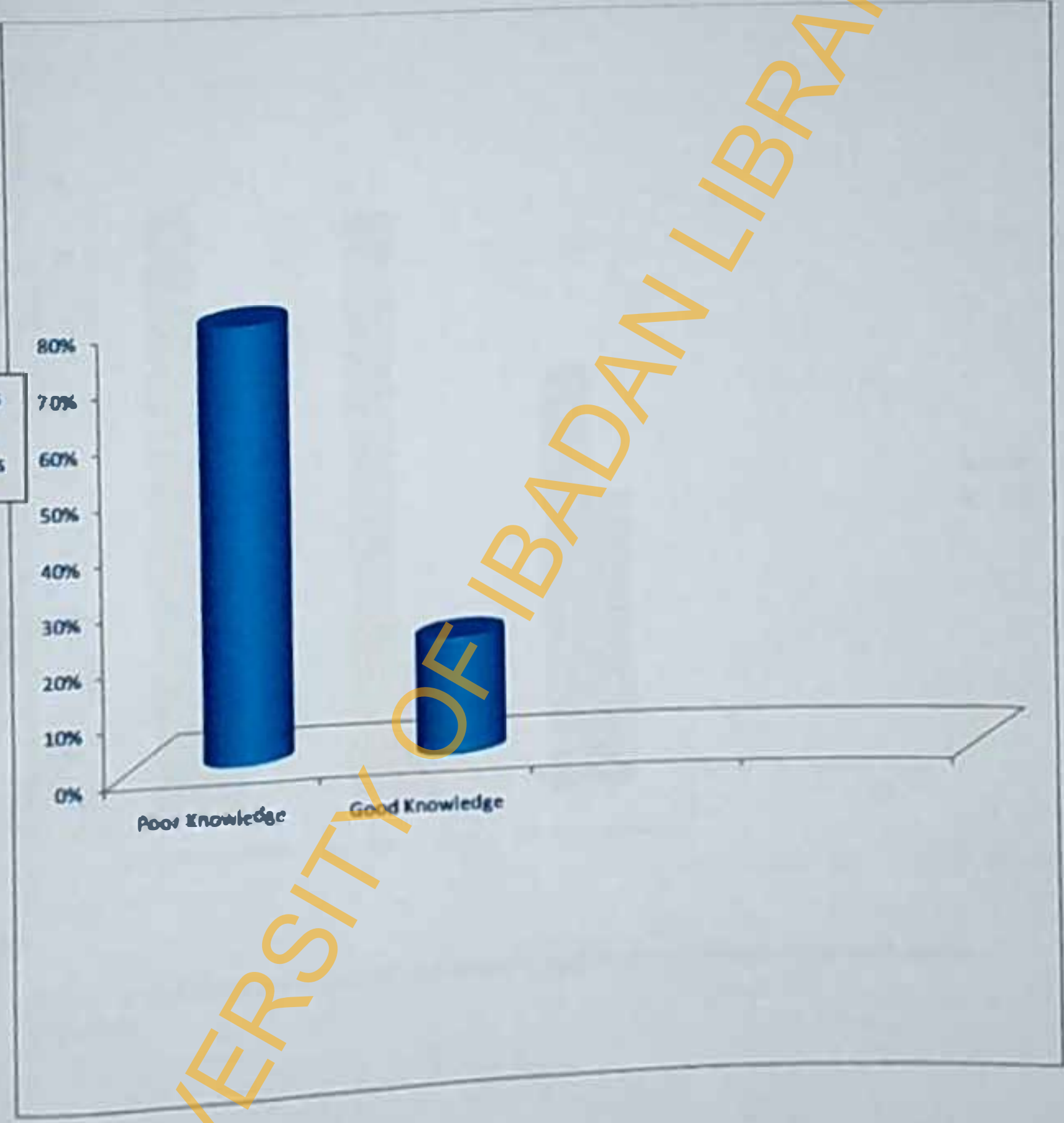


Figure 1: Respondents level of knowledge Cervical cancer screening

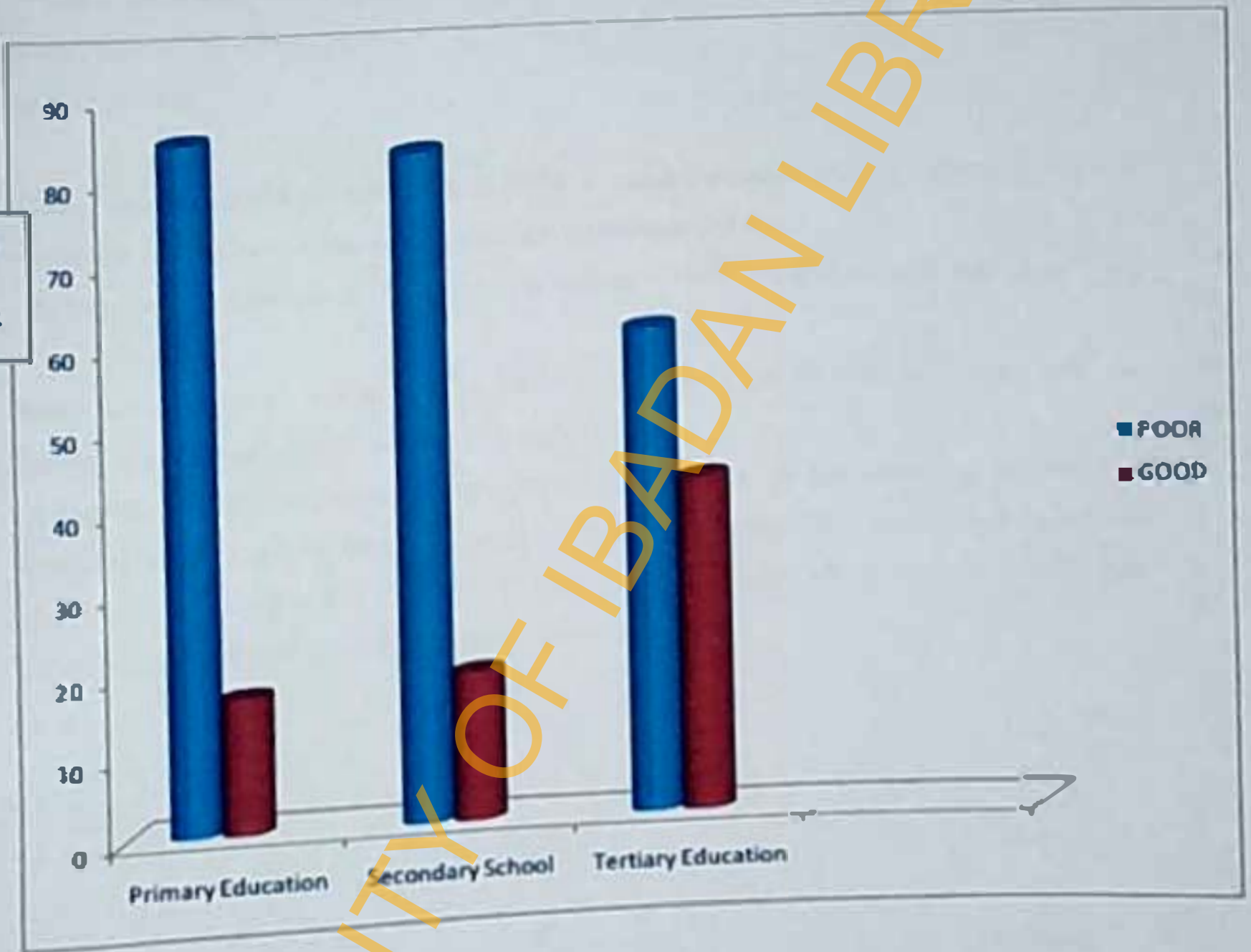


Figure 2: Educational status of respondents and knowledge level of cervical cancer screening

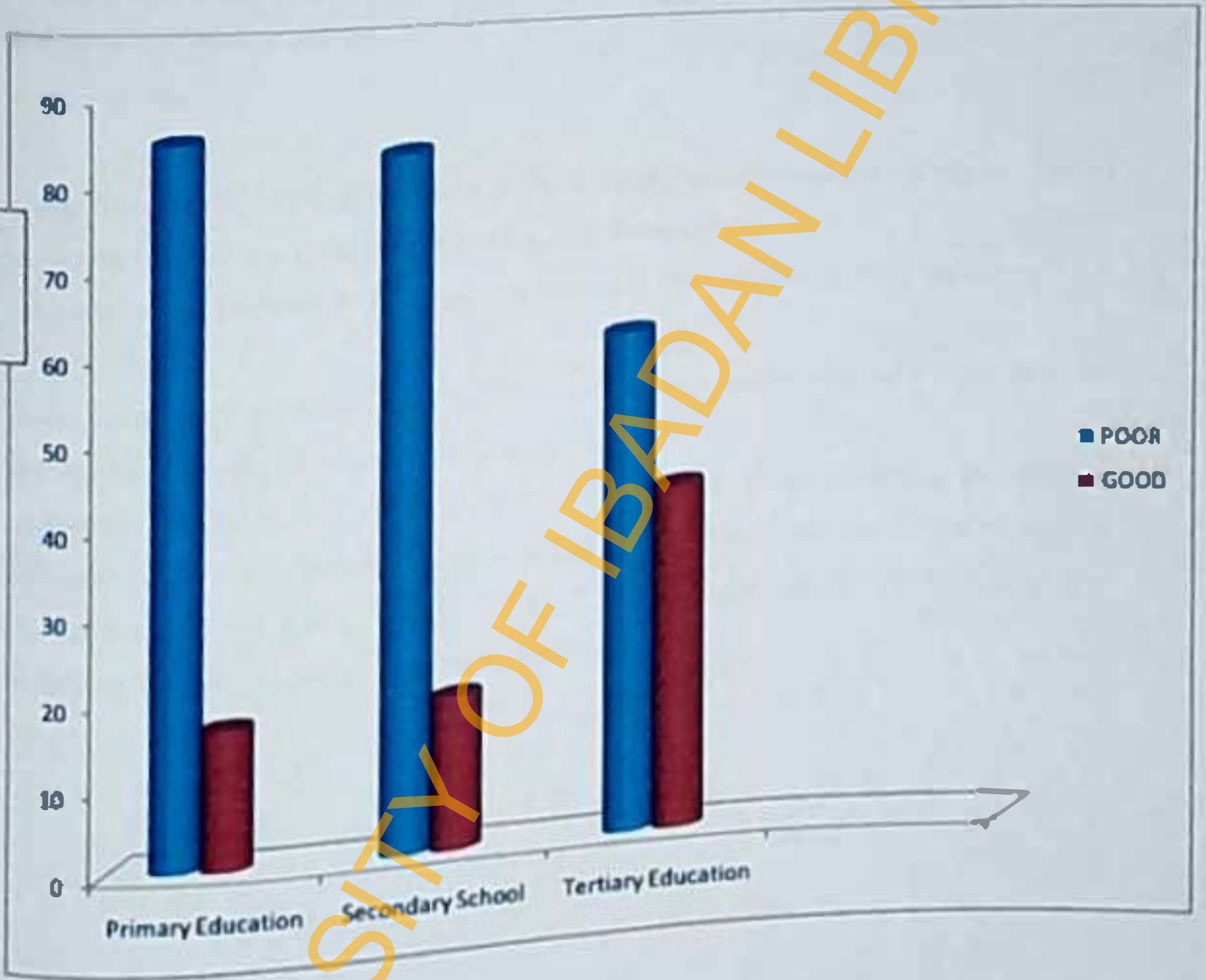


Figure 2: Educational status of respondents and knowledge level of cervical cancer screening

4.3 Attitudinal disposition of men towards spouses screening

Most men are indifferent about who screens their wife, they do not have preference, so long as it is for the good of the family. A participant from the group remarked:

"I don't have preference ni oooo, so long as the screening is for health, no problem any health worker man or woman can screen her"

Many men perceived cervical cancer to be a serious disease and are willing to support screening if they have adequate knowledge they remarked that:

"because we no know we na fit act, na wein person know about n am e fit talk about"

Some participants remarked that *"we fit make our wife go for screening even with our money, but we no no wein you dey talk about"*.

In English translation means they can persuade spouses to go for screening, they can give financial support in their own little way, but said there is little they can do now as regards the questions being asked because if they had knowledge about cervical cancer and screening, they would be able to provide better answers.

4.3.1 Frequency distribution of attitudinal disposition of men towards cervical cancer screening

With the series of questions asked men responses followed thus: Many respondents 154 (50.6%) cannot tolerate another person putting hands into my wife vaginal for screening sake and 150 (49.4%) said they can. Most men 231 (76%) agreed their spouse can go for screening if she sees the need while 73 (24%) cannot. Many 262 (86.2%) said she can persuade my spouse to go for screening, while 42 (13.8%) cannot. Most 267 (87.8%) can send my wife for screening while 37 (12.5%) cannot. More so, 200 (65.7%) have not sent my wife for screening while 104 (34.2%) have done so. Many 268 (88.2%) think cervical cancer screening is necessary, while 36 (11.8%) don't. Some 114 (37.6%) agree they expose partner to HPV infection at every sexual intercourse, while 190 (62.5%) disagreed. Also, 134 (44.1%) feels their circumcision completely protects my partner from HPV infection 170 (55.9%). After individual scoring and grading 139 (45.7%) respondents had negative attitudinal disposition, while positive attitudinal disposition was 165 (54.3%).

Table 4.3: Attitudinal disposition of men towards cervical cancer screening on likert scale

STATEMENT	Agree (%)	Strongly Agree	Disagree	Strongly Disagree	Total
I cannot tolerate another person putting hands into my wife vaginal in the name of screening	22 (7.2)	54 (17.7)	76 (25.1)	152 (50.0)	304
My wife can only go for screening if she sees the need	76 (25.0)	156 (52.1)	51 (16.0)	21 (6.9)	304
I can persuade my spouse to go for screening	72 (23.7)	190 (62.5)	22 (7.3)	20 (6.6)	304
I can send my wife for screening	70 (23.0)	197 (64.8)	23 (7.6)	14 (4.6)	304
I have not sent my wife for screening	118 (38.8)	78 (25.7)	8 (2.5)	100 (33.0)	304
I think Cervical cancer screening is necessary	67 (22.0)	201 (66.1)	25 (8.3)	11 (3.6)	304
I expose my partner to HPV infection at every sexual intercourse	34 (11.2)	80 (26.3)	93 (30.5)	97 (32.0)	304
My circumcision completely protects my partner from HPV infection	80 (26.3)	54 (17.8)	46 (15.1)	124 (40.8)	304

Table 4.3: Attitudinal disposition of men towards cervical cancer screening on likert scale

STATEMENT	Agree (%)	Strongly Agree	Disagree	Strongly Disagree	Total
I cannot tolerate another person putting hands into my wife vaginal in the name of screening	22 (7.2)	54 (17.7)	76 (25.1)	152 (50.0)	304
My wife can only go for screening if she sees the need	76 (25.0)	156 (52.1)	51 (16.0)	21 (6.9)	304
I can persuade my spouse to go for screening	72 (23.7)	190 (62.5)	22 (7.2)	20 (6.6)	304
I can send my wife for screening	70 (23.0)	197 (64.8)	23 (7.6)	14 (4.6)	304
I have not sent my wife for screening	118 (38.8)	78 (25.7)	8 (2.5)	100 (33.0)	304
I think Cervical cancer screening is necessary	67 (22.0)	201 (66.1)	25 (8.3)	11 (3.6)	304
I expose my partner to HPV infection at every sexual intercourse	34 (11.2)	80 (26.3)	93 (30.5)	97 (32.0)	304
My circumcision completely protects my partner from HPV infection	80 (26.3)	54 (17.8)	46 (15.1)	124 (40.8)	304

Table 4.4: Attitudinal disposition of men towards cervical cancer screening on positive and negative scale

STATEMENT	Positive N(%)	Negative	Total
I cannot tolerate another person putting hands into my wife vaginal in the name of screening	150 (49.4)	154 (50.6)	304
My wife can go for screening if she sees the need	231 (76)	73 (24)	304
I can persuade my spouse to go for screening	262 (86.2)	42 (13.8)	304
I can send my wife for screening	267 (87.8)	37 (12.2)	304
I have not sent my wife for screening	104 (34.2)	200 (65.7)	304
I think cervical cancer screening is necessary	268 (88.2)	36 (11.8)	304
I expose my partner to HPV infection at every sexual intercourse	114 (37.5)	190 (62.5)	304
My circumcision completely protects my Partner from HPV Infection	170 (55.9)	134 (44.1)	304

On the scale, individual respondent attitudinal scores ≤ 8 and >8 points were categorised as negative and positive respectively. According to individual scores analysed, a frequency of those who scored less than or equal to eight and greater was drawn and classified into poor and good. Hence attitudinal disposition grade calculated from respondents score N (%)

Negative	139 (45.7)
Positive	165 (54.3)
Total	304 (100)

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Percentages of the respondents

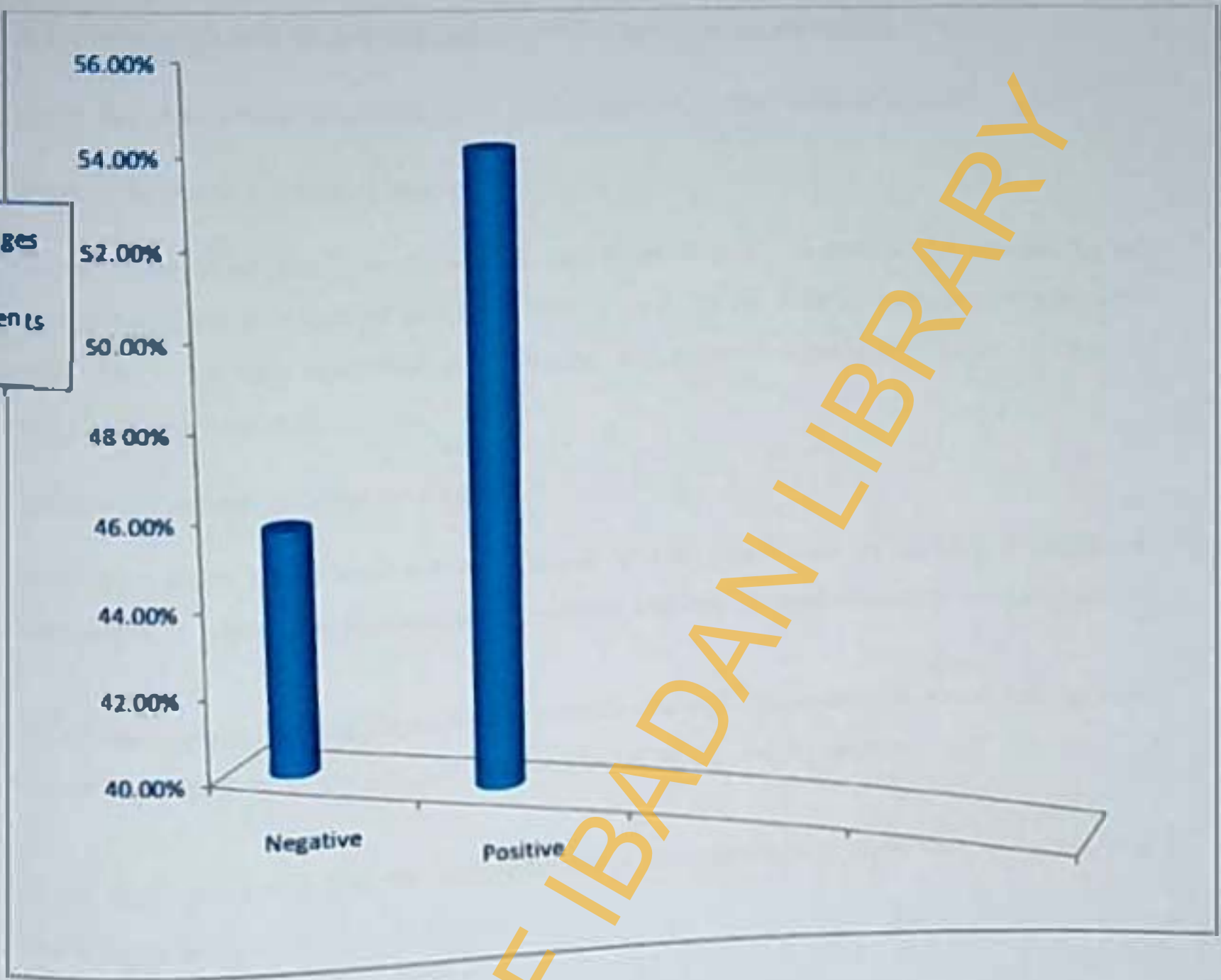


Figure 4.3: Respondent attitudinal disposition to spouses screening

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4.4: Perception of men towards spouse's cervical cancer screening

From the focus group discussion most participants responses were as follows:

Is cervical cancer a serious disease?

Some of the responses from discussants when asked if it is a serious disease are "Alhh cancer? disease yi a serious gan oooo llllll" they quote. Respondents perceive cancers generally to be very dangerous and dreaded, but were not particular about cervical as they lack its awareness.

Which woman can have cervical cancer?

After explaining again what cervical cancer is, and that it can be sexually transmitted, *Onisekuse ni ooooo* was their response meaning that only promiscuous women can have it.

Some participants believe their spouse can never have the disease since she is faithful they quote "my wife e no fit got am, na only me she know, she no dey go out".

Some discussants also said that they take drugs from protection when they have sex, and the drug protects them from infections.

Some men said that "anytime I carry woman, I use condom and e dey protect me from disease. Which means that they use condom whenever they had to have sexual intercourse with any woman, and they believe condom protects them from all forms of sexually transmitted infections, so have nothing to be afraid of.

Is screening important?

When asked how important many respondents perceived screening to be important. They responded thus: *Yes now, test. Ayewo O se Patuki gidl gan, gan / oo*. This means of a truth any screening of any disease is very important, because it allows to know how healthy you are.

4.4.1 Frequency distribution of respondents perception responses

The study had the responses to questions as follows. My wife or any woman I know can never have cervical cancer, 44 (14.5%) agreed and 82 (26.6%) strongly agreed, while 89 (29.3%) disagreed and 89 (29.3%) strongly disagreed to that. Cervical cancer is a punishment from the gods to promiscuous women 17 (5.6%) agreed and 97 (31.9%) strongly agreed, while 63 (20.7%) disagreed and 127 (41.8%) strongly disagreed. Cervical cancer is not a serious disease 3 (1.0%) agreed and 28 (9.2%) strongly agreed, while 107 (35.2%) disagreed and 166 (54.6%) strongly disagreed. Unfaithful women are the ones to go for screening, 19 (6.3%) agreed and 90 (29.6%) strongly agreed, while 51 (16.7%) disagreed and 144 (47.4%) strongly disagreed. Screening is another strategy of doctor to collect money from us 12 (4.0%) agreed and 90 (29.6%) strongly agreed, while 133 (43.8%) disagreed and 142 (46.6%) strongly disagreed. Screening is just a waste of time 9 (3.0%) agreed and 13 (4.3%) strongly agreed while 132 (43.4%) disagreed and 150 (49.3%) strongly disagreed. I cannot harbour or transmit HPV virus, so why should my wife go for screening 75 (24.7%) agreed and 91 (29.9%) strongly agreed, while 53 (17.4%) disagreed and 85 (28%) strongly disagreed. Screening actually saves my wife from the pain of cervical cancer 63 (20.7%) agreed and 184 (60.5%) strongly agreed, while 44 (14.5%) disagreed and 13 (4.3%) strongly disagreed. Screening saves me from being a widower by not losing my wife to death due to cervical cancer 58 (19.1%) agreed and 189 (62.2%) strongly agreed, while 48 (15.7%) disagreed and 9 (3.0%) strongly disagreed.

Table 4.5: Perception of men towards cervical cancer screening

STATEMENT	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)	total
My wife or any woman I know can never have cervical cancer	44 (14.5)	82 (26.6)	89 (29.3)	89 (29.3)	304
Cervical cancer is a punishment from the gods to promiscuous women	17 (5.6)	97 (31.9)	63 (20.7)	127 (41.8)	304
Cervical cancer is not a serious disease	3 (1.0)	28 (9.2)	107 (35.2)	166 (54.6)	304
Unfaithful women are the ones to go for screening	19 (6.3)	90 (29.6)	51 (16.7)	144 (47.4)	304
Screening is another strategy of doctor to collect money from us	12 (4.0)	17 (5.6)	133 (43.8)	142 (46.6)	304
Screening is just a waste of time	9 (3.0)	13 (4.3)	132 (43.4)	150 (49.3)	304
I cannot harbour or transmit HPV virus, so why should my wife go for screening)	75 (24.7)	91 (29.9)	53 (17.4)	85 (28)	304
Screening actually saves my wife from the pain of cervical cancer)	63 (20.7)	184 (60.5)	44 (14.5)	13 (4.3)	304
Screening saves me from being a widower by not losing my wife to death due to cervical cancer	58 (19.1)	189 (62.2)	48 (15.7)	9 (3.0)	304

4.5 Willingness of men to support spouse's cervical cancer screening

From the focus group discussion most participants were willing to support spouses.

Many agreed to consent to spouses screening, some participants said remarked:

We fit send our wife for screening, since na for health, but na we need to notice signs.

Meaning that they are ready to send their spouse for screening as long as it is for health purposes, but not until they notice symptoms.

Some of the men said they will be ready to pay for their spouse screening. Most of the participants said they were willing to take spouses to the screening spots so long as they are informed about the centres.

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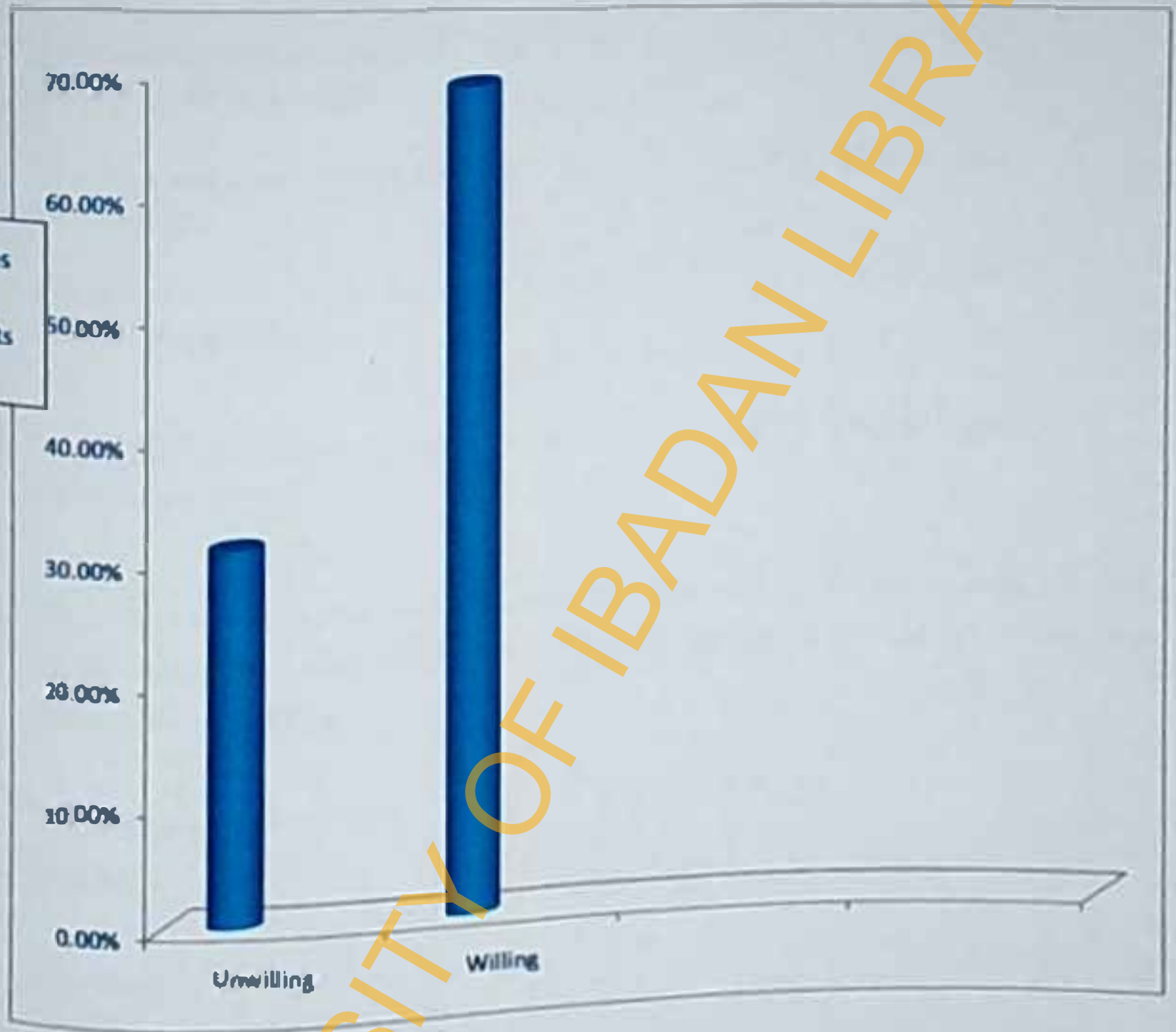


Figure 5: Respondents willingness to support spouse screening

Table 4.6: Willingness of men to support spouse's cervical cancer screening

STATEMENT	YES(%)	NO (%)	NO RESP.	TOTAL(%)
Would be ready to give consent for your spouse screening?	283 (93.1)	19(6.2)	2 (0.7)	304
If it is needful for you to pay will you pay for her screening?	278 (91.4)	23(7.6)	3(1.0)	304
How often would you be support for screening?	22 (7.2)	195(64.1)	87(28.7)	304
Would you be ready to take her to the screening point?	214 (70.4)	77(25.3)	13(4.3)	304
Do you have preference as to how and who screens her?	127 (41.7)	168 (55.3)	9(3.0)	304

The willing scale is a 14 point scale which had 7 questions with 2 point assigned to each of the questions. Respondents with willingness scores of <7 and ≥7 points were categorised as unwilling

Willingness grade however is:

Willing 68.5%

Unwilling 30.9%

4.6. Factors that can enhance men's support for spouses screening

Most discussants during the focus group discussions emphasised on their wish to know more about cervical cancer. They said they can support spouses, provided they are well informed.

Many participants passionately spoke about the economy of the country, and many people will choose to remain at home with their health condition because they cannot afford the cost of health services. Some specifically made references to the times of HIV/AIDS awareness, as quoted below

"As goment make everybody know about AIDS un make the screening free, like now me I dey go chek for HIV all the time, because we no pay money, so if goment make test for this cervical disease free or make we dey pay small money all of us must to send our wives".

Meaning that if cervical screening is made free or subsidised like HIV test, they do not have any reason not to send spouses for screening.

Some discussants said they need to be guided on where and how to get their spouses screened, while some suggested that the screening centers should be located nearby, in community, market place, or in all health centers.

A few said such kind of services that they know can be gotten from University teaching hospital which is a major tertiary health institution around, but don't like coming there because of the rigorous process involved in getting medical attention.

4.6.1 Frequency distribution of Optional Factors that can enhance men's support for screening

In this section men were provided with options to pick factors that will enhance their support and responses were as follows: Do you feel knowing more about cervical cancer will enhance your support? 290 (95.4%) opted for yes, 286 (94.0%) would want to be educated on the disease, 179 (58.9%) also opted for attitude of healthcare givers, awareness creation on the disease 264 (86.8%). Awareness creation on the disease was 264 (86.8%) who opted for yes, while 40 (13.2%). Knowledge of screening centre, most 236 (77.6%) men opted for yes and 68 (22.3%) men said no to it.

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Table 4.7: Optional factors that may enhance Men support for screening

STATEMENT	YES (%)	NO (%)	NO RESP.	Total (N)
Do you feel knowing more about cervical cancer will enhance your support?	290 (95.4)	14 (4.6)		304
Would you want to be educated on the Disease?	286 (94.0)	14(4.6)	4 (1.3)	304
Which of these below can enhance your support(Optional factors)	YES	NO		
Attitude of healthcare givers	179 (58.9)	25 (8.2)	100 (32.9)	304
Awareness creation on the disease	264 (86.8)	40 (13.2)		304
Knowledge of screening centres	236 (77.6)	68 (22.3)		304

Percentages of the respondents

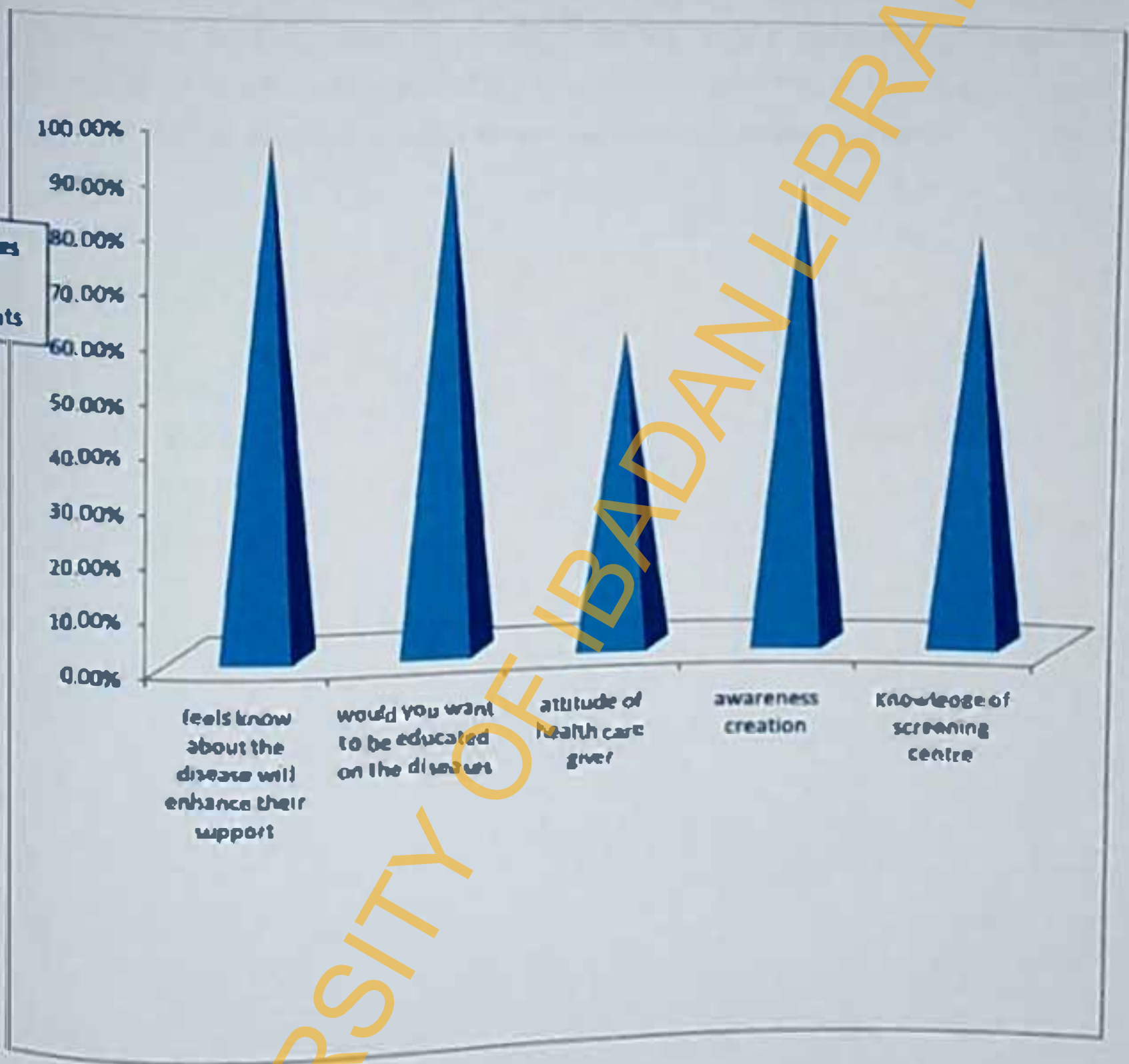


Figure 4.6: Factors that may enhance men support for screening

Frequency distribution of suggested Factors that can enhance men's support for screening

Respondents when further asked to suggest factors that will enhance their support, the following was listed: Public enlightenment 12 (36.8%), Screening centers in locality 64 (21.1%), Screening in places of worship 1 (0.3%), Subsidised screening charges 99 (32.6%), Free screening services 127 (41.8%), Mobile clinics 3 (1.0%), Skilled healthcare givers 13 (4.3%), and Free treatment for women when test positive 58 (19.1%).

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**Table 4.8: Suggested factors that can enhance men's support for spouses screening
(Multiple Response) N (304)**

	YES (%)	NO (%)	
Public enlightenment	112 (36.8)	192 (63.2)	*
Screening centers in locality	64 (21.1)	240 (78.9)	**
Screening in places of worship	1 (0.3)	303 (99.7)	**
Subsidized screening charges	99 (32.6)	205 (67.4)	**
Free screening services	127 (41.8)	177 (58.2)	**
Mobilo clinics	3 (1.0)	301 (99.0)	*
Skilled healthcare givers	13 (4.3)	291 (95.7)	**
Free treatment for women when test positive	58 (19.1)	246 (80.9)	**

Frequency distribution of factors that can enhance men's support for spouses screening (Screening Preferences)

Respondents when asked How and who would they want to screen spouses they responded as follows health care giver collection of sample 81 (92%), Self collection of sample 12 (3.9%) Husbands collection of specimen 6 (2.0%) Sex preference of health care giver few preferred male 3(1.3%) female 130 (42.8) while 171(55.9) preference Anybody. When asked reason whether any cultural or religious attachment to the preference all men 304(100%) have no cultural or religious attachment but their reasons were on personal ground.

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Table 4.9: Factors that can enhance men's support for spouses screening (Screening Preferences)

How would you want your spouse screened?	
Health giver collection of sample	281 (92%)
Self collection of sample	12 (3.9%)
Husbands collection of specimen	6 (2.0%)
No response	5 (1.6%)
If you prefer a health caregiver which sex?	
Male	3 (1.3%)
Female	130 (42.8)
Anybody	171 (55.9)
Why do you have your choice preference?	
Cultural issues	0 (0%)
Religion	0 (0%)
Personal	304 (100%)

Table 4.10 :Testing the Strength of Association: Logistics Regressions

Variables	df	Odd Ratio	p-value	95% C.I.
Education and Knowledge Tertiary/primary	2	3.5	0.03	0.1-0.7
Knowledge of cervical cancer and attitudinal disposition	1	8.3	0.001	0.1-0.3
Attitude and willingness	1	20	0.006	0.3-0.8

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4.8 : Hypotheses (Null)

- I. There is no significant relationship between educational level of respondents and knowledge of cervical cancer
- II. There is no significant relationship between respondent knowledge and attitudinal disposition
- III. There is no significant relationship between respondent attitudinal disposition and willingness

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4.9 : Test of hypotheses

Hypotheses 1: There is no significant relationship between educational level of respondents and knowledge of cervical cancer.

This table shows that there is a significant association between educational level of respondents and knowledge of cervical cancer. Knowledge level reduced with decrease in educational level. Respondents with tertiary education were more likely to have good knowledge of CC screening than those with primary education (OR:3.5, CI:1.5-8.1). Therefore the null hypotheses was rejected and the alternative that there is an association between educational level and knowledge of cervical cancer accepted.

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Table 4.11: Test of hypotheses 1

Education	Knowledge		Total (%)
	Poor (%)	Good (%)	
Tertiary	59.2	40.8	100
Secondary	81.9	8.1	100
Primary	83.6	16.4	100

$\chi^2 = 13.21$
 $P = 0.00$
 $df = 2$

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Hypotheses 2: There is no significant relationship between respondent knowledge and attitudinal disposition.

This table shows a significant association between knowledge and attitudinal disposition. Respondents with good knowledge had positive attitudinal disposition to cervical cancer screening, while those with poor knowledge had otherwise. Men with good knowledge were more likely to have positive attitudinal disposition (OR:20, CI:7.0-56.2) than those with poor knowledge. Hence if knowledge of cervical cancer is improved a better attitude to screening will be the resultant effect. The null hypothesis is rejected and an alternative hypothesis that there is an association between knowledge and attitudinal disposition to cervical cancer screening is accepted.

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Table 4.12: Test of hypotheses 2

Knowledge	Attitudinal disposition		Total (%)
	Negative	Positive	
Poor	6.5	43.5	100
Good	6.2	93.8	100

$\chi^2 = 52.16$
 $p = 0.001$
 $df = 1$

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4.12: Hypotheses 3: There is no significant relationship between respondent attitudinal disposition and willingness. This table shows that there is a significant association between men's attitude (disposition) and their willingness to support spouse. Men with positive attitudinal disposition were more willing to support spouses screening than those with poor attitudinal disposition (OR: 2.0, CI: 1.2-3.3). The null hypotheses that there is no association is rejected and the alternative hypotheses is accepted.

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Table 4.13: Test of hypotheses 3

Attitudinal disposition	Willingness to support spouse		Total(%)
	Unwilling (%)	Willing (%)	
Negative	39.8	61.2	100
Positive	24.2	75.8	100

$\chi^2 = 7.53$ $p = 0.001$ $df = 1$

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMENDATIONS

5.1 Discussion of Findings

5.1.1 Knowledge of Cervical cancer screening

During the FGD sessions it was discovered there is generally low level of knowledge on the disease, some would rather refer to cervical cancer as breast cancer and some men said cervical cancer is "atost egbe ni ooo" (in English translation means diabetes). Some said: "na die disease wey dey worry women for breast", (in English translation means it is a disease that occurs in the breast of women). Another said "na very deadly disease wey dey kill women well, and na breast e dey happen, even sef I know somebody wey e just kill." (in English translation means it a very deadly diseases that occurs in the breast of women and that he knows someone who just died of the disease). Some made jest of the researcher claiming it is a curse that can only afflict women who are unfaithful. The responses above are wrong information about cervical cancer which proves that true knowledge of the disease is lacking. The respondents were asked series of question during quantitative data gathering on knowledge of cervical cancer, how to identify the signs and symptoms, possible ways of prevention, the category of women that should be screened, how to screen, the major cause of the disease and importance of screening, but responses was very discouraging. This was further supported by finding from the quantitative data results too for example only (1.4%) of respondents had knowledge of symptoms, and 4.6% had knowledge of risk factors, and many do not know screening prevents cervical cancer.

This study relates to the study by Nnodu *et al.*, 2010. In studying women knowledge of cervical cancer and the human papilloma virus it was stated that: an overwhelming majority of the respondents said that cervical cancer and human papilloma virus could not be prevented. According to Nnodu's findings the respondents were asked if they know of cervical cancer and human papilloma virus and the outcomes indicate that very small proportions know about these diseases. However, a close analysis indicates that more among the old and those with high education had heard about cervical cancer while more among the southern, urban and the 'others sub groups' in the sample in contrast to those among the northern, rural and married ones have heard of human papilloma virus

respectively (Nnodu *et al.*, 2010). Most men have little knowledge on reproductive, they have no proper knowledge of symptoms, transmission of infection and prevention of reproductive tract infections and sexually transmitted diseases. Recently, there is increasing evidence that male plays fundamental role to avoid risky sexual behaviors (Hossain, Rob, Khan, and Sabir, 2004).

However, it is evident that irrespective of the presence of the Cancer Control Plan since 2008, this study and Nnodu's study in 2010 has proven that the Cancer Control Plan has made no impact especially on the area of cervical cancer awareness creation. Jolin 2011, in his study of the knowledge, attitude, practice and perceived barriers towards screening for premalignant cervical lesions among women aged 18 years and above, in songea urban, Ruvuma in Tanzania, found that generally the knowledge was poor, attitude was positive to majority of respondents but again practice was found to be very poor. The results showed that 243 (78.6%) had poor knowledge, 61 (19.7%) had satisfactory knowledge and only 5 (1.6%) had good knowledge. Overall 172 (55.7%) of the respondents were positive about cervical cancer and screening for premalignant cervical lesion. Among 309 respondents, 14.2% only have ever been screened. The study has shown that there is a lack of knowledge on cervical cancer and screening for premalignant cervical lesion. There is also poor utilisation of screening services available at the study area. The reason for poor practice among others was lack of knowledge and information.

From the study by Frida, and Tanya 2012, using the sum of the knowledge items, they determined that over half (59.6%) of the participants had a low level of knowledge of cervical cancer and its prevention, less than a quarter (21.2%) had a medium level, and less than a quarter (19.2%) had a high level of knowledge. Out of the 80 women who reported having been screened, those with the highest level of knowledge about cervical cancer and its prevention were more likely than those with low and medium levels of knowledge to have been screened. Also, from the work done by Tara and colleagues (2005) among college aged males on perceptions and knowledge of HPV and cervical cancer, they found that men who had knowledge of HPV and its links to cancer had higher intentions of reducing their number of sex partners, and use a condom with a new partner. This suggests that illuminating a clearer picture of college-aged men's knowledge and perceptions of HPV and cervical cancer may help in the formulation of prevention interventions that may reduce HPV infection rates in women (Castellanos *et al.*, 2002).

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Men might not be equipped with sufficient information and knowledge about sexual and reproductive health, because they are often marginalised by health services which do not have provisions for males (Maja, 2006). This speaks greatly of how much support for screening can be gotten if men are well informed.

According to the study by Frida and Tanya 2012 amongst women and the uptake of cervical cancer screening, a logistic regression analysis was performed using the eight characteristics found to be significantly related to screening uptake (husband approval of cervical cancer screening, level of education, knowledge of cervical cancer and its prevention, concerns about embarrassment and pain of screening, preference for the sex of health provider, and awareness of and distance to cervical cancer screening services) to determine which are most closely related to screening status. The likelihood of screening was almost nine times (OR = 8.90, 95%CI = 2.139- 16.025) as likely for women who had a high level of knowledge about cervical cancer as those with less knowledge. Also, the likelihood of screening was almost four times (OR = 3.98, 95%CI = 0.180- 5.104) as high if they resided 2 to 5 km from the facility which provides cervical cancer screening services compared to those who lived further away. In sum, the most important factors related to uptake of cervical cancer screening were knowing about cervical cancer and its prevention, and residing within a five kilometers from the nearest service facility. In addition, women with college education had screened for cervical cancer more often compared to their counterparts.

A study of women in rural community in China found that the knowledge level about cervical cancer was low among the participants, and women who were willing to participate in the screenings had a higher knowledge level. Studies of the various areas of knowledge have demonstrated that the lack of knowledge about cervical cancer appears to be an important barrier to participation in cervical cancer screenings. The women's knowledge of cervical cancer was shown to correlate with participation in cervical cancer screenings. Although a national cervical cancer-screening program has been promoted in different areas in China, the lack of knowledge about cervical cancer remains an important factor that affects the participation of women in these screening programmes. (Yao, Shuang, Ru, Quinying, Ting, Qianghua, Zhilun, Ding, and Ling, 2013).

In contrast, (Al-Meer, Aied, Al-Khalaf, Al-Kuwari, and Ismail 2009) in studying knowledge, attitude and practices regarding cervical cancer and screening among women

visiting primary health care in Qatar, they found that over 80% had heard about cervical cancer and about three quarters had heard about the Pap smear. In Jordan, the knowledge of cervical cancer and the Pap smear test was inadequate in less-educated and older patients. Of the women who had previously had the test, 95.4% had opportunistic testing. The poor level of knowledge amongst some respondents was related to illiteracy and unemployment, which also indicates educational status the majority of employed women in Qatar are educated. This relation between education and knowledge has been reported in previous studies in Arab and Hispanic women. In agreement with other studies from Arab countries Latin and Asian communities their study showed that women > 50 years had poor knowledge about cervical cancer and screening; in fact most of the illiterate women in Qatar are in this age group. Consequently, in Al-Meer *et al.*, study knowledge of both cancer of the cervix and Pap smear improved significantly after the intervention and more respondents were knowledgeable about the disease and about Pap smear. As these values remained virtually the same in the control group, it could be assumed that the knowledge improvement in these variables was probably due to the health education intervention that was given.

Adamu, Abiola, and Ibrahim, 2011, in their study of the effect of health education on the knowledge, attitude, and uptake of free Pap smear among female teachers in Bimin-Kebbi, North-Western Nigeria following intervention the mean knowledge score differed significantly between the intervention and control groups ($P < 0.0001$) and for the intervention group pre- and post-intervention ($P < 0.0001$). An improvement of 124.3% in the mean knowledge score was observed in the intervention group compared to 13.7% in the control group. The very poor uptake of free Pap smear after counseling reported in the present study, although similar to findings reported by Wright *et al.* in their study on market women in Lagos, Nigeria, it differed from what was reported by Adamu *et al.* in their study on health workers, conducted in Sokoto a 50% uptake rate for free Pap smear was recorded after counseling. This latter research from Adamu and colleagues that was conducted in the hospital among health workers, and the fact that they received the health education in the hospital and their closeness to the screening facility could have impacted positively on the respondents' response to the health education intervention.

In their study women with higher knowledge of HPV were more accepting than their counterparts of the HPV vaccine for their adolescent daughters. Following a report of the

first phase of exploratory research growing out of a parent grant on breast and cervical cancer screening among Latinas in Colorado. The data gathered from 14 focus groups conducted with Latino (Mexican, Mexican-American, and other Hispanic) males to identify their supportive and non-supportive attitudes and behaviors toward their spouse's breast and cervical cancer screening. The men represent a cross-section of Latino males, the findings presented here are strongly suggestive and not representative of Latinos as a whole. Latinos exhibited three distinct modes of knowledge and attitudes toward their partners' healthseeking efforts. The first mode was characterized by limited knowledge, a lack of information, and for some, disinterest or even disdain. Those in the second mode can be considered "generalists" who knew only generalities concerning their wives' health status and practices. The third mode includes Latino males who were genuinely interested in seeking "meaningful ways" to promote their partners' health and well-being. These long-time married couples seemed to have strong relationships highlighted by a genuine concern for each others' well-being, including their health problems. The younger cohorts were generally unconcerned about their spouses' breast and cervical cancer screening and lacked knowledge in the area. (Kamh, Noel and Jennifer, 2010).

As age and educational level increased, so did the general awareness and knowledge of breast and cervical cancer increase this however supported the findings of this research. Most Latinos, however, lacked specific knowledge about screening, the procedures, or the recommended frequency of such examinations the researchers went further to recommend that accurate information about cervical cancer must be made available so that women can acquire knowledge about cervical cancer, especially the risk factors, screening methods, treatments and importance of regular screenings for early diagnosis (Flores and Mata, 1995). Also in Kenya, a study done revealed that only 32% of women admitted in a hospital knew about Pap smear testing. When, however Pap Smear was explained to the participants in this study, a large number, 315 (72.1%) was willing to undertake the test.

5.1.2: Attitudinal disposition of men to cervical cancer screening

The FGD sessions shows that participants attitude was good, and screening is a welcomed idea so long as it is for health purposes. They made statement like "I don't have preference at all, so long as the screening is for health, no problem any health worker man or woman can screen her". This further supported the quantitative results which showed attitudinal disposition was not so poor compared to knowledge level. About

(50.6%) cannot tolerate another person putting hands into my wife vaginal in the name of screening, many (76 %) supports that wife can go for screening not only when if she sees the need but encourage her to, almost all (86.2%) accept they can persuade spouse to go for screening. Also, most respondent (87.8%) can send wife for screening, although majority (66%) of men have not sent my wife for screening. More so, (82.2%) of men think cervical cancer screening is necessary, many (62.5%) actually accepted that they expose their partner to HPV infection at every sexual intercourse while some respondents (44.1%) believe that because they are circumcised their spouse is completely protected from HPV infection.

One significant finding here is that irrespective of the respondents poor knowledge, the attitudinal disposition was over average. Although those who were more knowledgeable or educated, had better attitudinal disposition to supporting spouses screening. The men under study specifically agreed not to know about the disease but are very positive on every step to ensure their spouses remain healthy. According the study by Frida and Tanya, 2012 disapproval of the service reflects a lack of personal interest or hostility to the subject, of which a study done in India revealed similar results. Their findings revealed that husbands' approval of cervical cancer screening is strongly associated with participants' cervical cancer screening status. Al-Meer et al., 2009 in studying knowledge, attitude and practices regarding cervical cancer and screening among women visiting primary health care in Qatar found that women in Qatar have a positive attitude towards cervical screening services although they need to have reassurances that can reduce the barriers to having a test.

5.1.3: Perception of Men towards Cervical Cancer Screening

The FGD revealed some wrong perception most men have about cervical cancer. A good example is that after explaining to the what cervical cancer is, and that it can be sexually transmitted, when asked who can have the disease, they responded : " *Onisekuse ni ooooo* transmitted, when asked who can have the disease, they responded : " *Onisekuse ni ooooo* was their response meaning that only promiscuous women can have it. Some participants believe their spouse can never have the disease since she is faithful they quote "my wife e *no fit get am, na only me she know, she no dey go out*". This actually support the quantitative finding that some men (35.5%) in the study perceived cervical cancer as a curse to promiscuous women. Some discussants also said that they take drugs from

protection when they have sex, and the drug protects them from infections. Some men said that 'anytime I carry woman, I use condom and e dey protect me from disease. Which means that condom use protects them during sexual intercourse with other women. Some 40.5% perceived their spouse not susceptible to cervical cancer and that cervical cancer screening is helpful and majority felt they lack adequate knowledge and is affecting their response to supporting spouses. Also, some believe that only unfaithful women are the ones to go for screening. Many believe their spouses cannot harbour or transmit HPV virus, so why should my wife go for screening. Majority (81.2%) perceived screening actually saves their spouse from the pain of cervical cancer. Similarly, in Lopez *et. al.* 2008 study, it was reported that participants reported high perceived severity of (74%), and susceptibility to (88.9%) HPV infection. They also reported perceived benefits (75.3%) to preventative sexual behavior and perceived obstacles (81.4%) to initiating those behaviors. Of those who were sexually active, 74.3% were self-efficacious to wear condoms during their next sexual encounter, 26% intended to wear condoms the next time they have sex, and 53.4% intended to reduce their future number of sex partners in order to decrease the likelihood of contracting HPV.

5.1.4: Willingness to Support Spousal Screening

In this study it was revealed that most men would be ready to give consent for their spouse screening, many agreed to pay if it is needful to pay for spouse screening, many would be ready to take her to the screening point, and some do not have preference as to how and who screens her. Irrespective of their knowledge level men of a many men were willing to support spouses. In contrast, the study by Yao *et. al.*, 2013, shows there was a significant difference in the total knowledge levels between women with different levels of willingness ($P < 0.01$) such that women who were willing to undergo screenings had higher knowledge levels. Women with higher education and income levels had higher levels of knowledge ($P < 0.01$).

5.1.4.1 Factors that can Enhance Men's support for spousal screening

Optional Factors

In this section men were given options of factors that can enhance their support for spousal screening to pick and the results were as follows: 95.4% felt knowing more about cervical

cancer will enhance your support? 94% would want to be educated on the disease? 58.9% said attitude of healthcare givers is contributive factor to them permitting spouse go for screening, 86.8% opted for awareness creation on the disease, 77.6% said the knowledge of screening centre can enhance their support for spouses.

Suggested Factors

In this multiple response section, respondents were asked to suggest factor that can enhance their support for spousal screening. From the FGD sessions some of the factors listed included awareness creation, reduced cost of screening, nearness to screening centers. This supported the quantitative results suggestions of Public enlightenment 112 (36.8%), Screening centers in locality 64 (21.1%), Screening in places of worship 1 (0.3%), Subsidised screening charges 99 (32.6%), Free screening services 127 (41.8%), Mobile clinics 3 (1.0%), Skilled healthcare givers 13 (4.3%). These suggestions partially relates to Hatch, Herbst and Hoover 2001, in their study predictors of cervical cancer screening for rarely or never screened rural Appalachian women. Significant enabling factors they found included (a) employment status, (b) knowing where to access screening, (c) preferring weekend appointments, (d) having no regular physician/source of medical care, and (e) believing that screening is too expensive. Being employed part-time rather than unemployed, having no regular physician, and believing that screening is too expensive were all associated with significantly increased odds of belonging to the rarely or never-screened group, compared to the recently-screened group.

This is further supported by other barriers that have also proven significant in previous studies, including access (Aguirre, Bishop, Sanchez, Detancourt, and Robles, 2004); cost and not being told of the test (Fernandez-Eguren, Espinoza, Torres, Ramirez, A., and McAlester, 2003); pain and embarrassment (Lazcano-Ponce, Moss, De Ruiz, Castro, and Avila, 1999.); and education level (Lazcano-Ponce *et al.* 2002). Other barriers that have been cited in the literature which were not found to be significant in this study include fear of results (Aguirre *et al.* 2004), fatalism, opposition by male partner, and being examined by male health care providers (Lazcano-Ponce *et al.* 1999).

5.2 Implication of Findings for Health Promotion and Education

It is obvious from findings, the importance of men involvement in the planning, and implementing screening programmes. Therefore there is need for community based health education on cervical cancer and screening for women targeting men. The Health Educators and Promoters have a very vital role in educating men. The community based education has to be continuous for the purpose of behaviour reinforcement. Through health education there can be increase in knowledge on the disease for both men and women. Through health education there is bound to be a change in non-challant attitude of men to supporting spousal screening.

Public enlightenment will be very useful and effective, which will also involve the Health educators and promoters.

Also the area of support groups or associations in communities like: Road transport workers, Men's association of building material sellers etc. can be harnessed as one may not tell what they tend to benefit if they send spouses to screening.

Such health educational programme on promoting screening should focus on key areas such as: threats posed by lack of screening for cervical cancer, it is easily preventable, screening for CC is painless, the importance of CC screening to women and their husbands (the Men).

5.3 Conclusion

As found in this study the level of knowledge of cervical cancer and preventive measure is very low. There was negative and positive attitudinal disposition and perception that exist among participants which has a relationship with their level of knowledge. Also, the level of willingness to support spousal screening was in relation to knowledge. Most of the men expressed so much interest in wanting to know more about the cervical cancer and its prevention, several factors have been suggested that can enhance support for women to participate in screening and this calls for urgent attention in the fight against cervical cancer. The findings of this study constitute useful data for programme design, development, planning and implementation on increasing knowledge of cervical cancer and screening, will have effect on men's attitude, perception, willing to support spousal screening and a resultant effect of increased utilization of screening services.

From this study we also find that there is also a place for political will in policy implementation. The National Health Policy 2004, specifically states the need for awareness on cervical cancer, it is disheartening to find that after ten years after the policy not much has been done, as knowledge on cervical cancer is still very low.

5.4 Recommendations

The following recommendations are made based on the findings of this study:

1. Good knowledge as demonstrated in the study was associated with positive attitudinal disposition, and perception, this had influence on men's willingness to support CC screening. Therefore, there is need for enlightenment programmes by government in partnership with non-governmental organisations and other voluntary groups to improve knowledge of men on CC and its screening in Nigeria. Furthermore, this study shows that attitudinal disposition was fairly good and willingness well over average despite the poor knowledge level. This speaks volume and suggest the fact that knowledge upgrade will greatly increase attitudinal disposition, perception, willingness of men to support screening, which will eventually reduce morbidity and mortality due to cervical cancer. This is a wake-up call for government at all levels to rise up to the task, provide financial, material and human resources to raise awareness and knowledge creation on cervical cancer screening importance involving men.
2. As rightly said by the men, they do not know any cancer screening centre where their spouses can obtain screening in the LGA, this is related to the fact that there are no screening centers in IBNELGA. The University College Hospital, Oluyoro and Adeoyo are the few health facilities offering cervical cancer screening in other Local Government Area close to IBNELGA, with Adeoyo health facilities currently not functional due to equipment breakdown (OYINOH 2014). This calls for attention to locate screening center in any of the health facilities in the Local Government.
3. There should be an increased involvement of mass media that is the TV houses, radio stations, the entertainment industry etc in informing the masses on the

importance of screening. This is an opportunity to explore the enter-education approach of public health.

4. Accessibility to affordable prevention services is key, the cost of screening should be subsidised or possibly made free as specifically mentioned by participants. This will motivate men's support for screening. Knowledge creation is not enough, when it is not affordable people will do little or nothing about it.
5. Massive awareness and campaigns should be carried out on available screening centres, where screening services are available.
6. The need to involve religious organisations cannot be overemphasized the Religious leaders should be involved as tool to influence men through the religious organisation to support spouses to go for screening. It should be integrated into counseling, and seminars.

5.5 Suggestion for further studies

Research on the following are recommended for further study

- The Effectiveness Of Community Based Health Education On Men's Knowledge Upgrade, and Increased Participation In Screening.
- It is recommended that this same study be carried out in other local governments in Ibadan for the purpose of findings generalisation.

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APPENDICES

APPENDIX I

FOCUS GROUP DISCUSSION GUIDE (FGD)

(For Qualitative data and in-depth information collection)

Introduction

I am a student of the Department of Health Promotion and Education, Faculty of Public Health, University of Ibadan. I am carrying out a study on men's knowledge and disposition to cervical cancer screening, in Ibadan north east LGA Ibadan Nigeria. You will be asked some basic questions, and your responses will be kept very confidential. The information given will be helpful to the Government in future to know how best to plan intervention programme on prevention of cervical cancer amongst women. This will contribute to ensuring optimum health for women in the community and the entire public.

Please I will like to know your names what you do and more things about you as individuals, before we commence our focus group discussions.

<u>SN</u>	<u>Question</u>	<u>Follow-up Question</u>
1	What do we understand by the term Sexually transmitted diseases?	Who exactly can have STI's?
2	What have we heard about human papilloma virus?	How is it transmitted?
3	What have we heard about cervical cancer?	And how does it come about?
4	How can you prevent it?	What do you know about screening for Cervical Screening?
5	What role does screening for the disease play?	Why have you not asked your spouse to go for screening?
6	where can one get screening services?	where?
7	How would you prefer your wife to be screened?	By who?
8	Which woman can have cervical cancer	What will be your reaction if your wife has cervical cancer?
9	Why such reaction?	State reasons
10	How willing are you to support your wife for screening	What are your reasons
11	What can make you send your wife for screening	Give example

APPENDIX 11

Consent form

I am a student of the Department of Health Promotion and Education, Faculty of Public Health, University of Ibadan. I am carrying out a study on men's knowledge and disposition to cervical cancer screening, in Ibadan north east LGA Ibadan Nigeria. You will also be asked some basic questions, the responses will be kept very confidential. The information given will be helpful to the Government in future to know how best to plan intervention programme on prevention of cervical cancer amongst women. This will contribute to ensuring optimum health for women in the community and the entire public.

You are free to decline if you do not wish to take part in this programme. You also have the right to withdraw at any given time if you choose. I will appreciate your help in giving your consent to take part in this study.

Consent:

Now that the study has been well explained to me and I fully understand the content of the study process, I hereby agree to take part in the programme

Signature and Date

Signature & date

Investigator/Witness

APPENDIX III:

Questionnaire

I a student from the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Oyo State, Nigeria. I am conducting research on men's knowledge and disposition to cervical cancer screening, in Ibadan North east Local Government area. Information from this study will be relevant to policy making, the findings can be incorporated in the health policy to come up with sustainable measures to reduce the burden of the disease.

Thanks for your cooperation.

Date.....

Questionnaire No.....

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

- 1) Age as at last birthday in years
- 2) Educational qualification (I) Primary (II) Secondary (III) tertiary (IV) no formal education
- 3) Ethnicity (I) Igbo (II) Yoruba (III) Hausa
- 4) Marital status (I) married (II) separated (III) widow (IV) Single
- 5) Religion (I) Christian (II) Muslim (III) Traditional
- 6) Marriage Type (I) Monogamy (II) Polygamy
- 7) Occupation 1) Employed 2) self employed 3) unemployed

SECTION B: MEN'S KNOWLEDGE ON CERVICAL CANCER SCREENING

	STATEMENT	OPTIONS	SCORES
008	Cervical cancer is a disease that can affect	(I) Any Woman (II) Teenage girls (III) Spinsters (IV) Don't know	
009	Cervical cancer is a disease that affects the	(I) The cervix of a woman (II) The breast of a woman (III) The heart of a woman (IV) don't know	

010.	Screening is only for	(I) Virus (II) Flies (III) Mosquitoes (IV) Don't know	
011	Screening becomes necessary if the woman is	I) Bathing just after sex (II) Screening for the Disease (III) Drinking much water before sex (IV) Don't know	
012.	Early detection through screening can	I) Kill someone (II) Make treatment easier (III) Increase infection (IV) Don't know	
013.	Screening is only for	(I) Married women (II) Every sexually active woman (III) Promiscuous women (IV) Don't know	
014.	Screening becomes necessary if the woman is	(I) Diabetic (II) Hypertensive (III) None of the above (IV) Don't know	
015.	Which of the following is not a form of cervical cancer screening	(I) Visual inspection with acetic acid (II) Pap smear test (III) Blood sugar test (IV) Don't know	
16	State 2 symptoms of cervical cancer	1 2	
18	State 2 risk factors of cervical cancer	1 2	

SECTION C: MEN'S ATTITUDINAL DISPOSITION TO CERVICAL CANCER SCREENING:

Please kindly indicate on a 4-scale whether you Agree (A), or Disagree(D), Strongly disagree(SD) to the following statements.

S/N	STATEMENT	A	SA	D	SD	SCORE
021	I cannot tolerate another person putting hands into my wife vaginal in the name of screening					
022	My wife can only go for screening if she sees the need					
23	I can persuade my spouse to go for screening					
024	I can send my wife for screening					
25	I have not sent my wife for screening					
26	I think Cervical cancer screening is necessary					
027	I expose my partner to HPV infection at every sexual intercourse					
028	My circumcision completely protects my partner from HPV infection					

SECTION C— MEN'S PERCEPTION TO CERVICAL CANCER SCREENING

Please kindly indicate on a 4- scale if you Agree (A), strongly agree (SA), or Disagree (D), Strongly disagree(SD) to the following statements

	STATEMENT	A	SA	D	SD	SCORE
031	My wife or any woman I know can never have cervical cancer					
032	Cervical cancer is a punishment from the gods to promiscuous women					
033	Cervical cancer is not a serious disease					
034	Unfaithful women are the ones to go for screening					
035	Screening is another strategy from the doctor to collect money from us					

036	Screening is just a waste of time					
037	I cannot harbour or transmit HPV virus, so why should my wife go for screening					
038	Screening actually saves my wife from the pain of cervical cancer					
039	Screening saves me from being a widower by not losing my wife to death due to cervical cancer					

SECTION D: MEN'S WILLINGNESS TO SUPPORT SCREENING

042). Will you give your consent to your wife to go for cervical cancer screening HPV)? (I) Yes ----- (II) No ---, (III) don't know)-----

043). If it is needful to pay for screening, would you be ready to support her financially (I) Yes --- (II) No ----- (III) I don't know

044). How often would you support her to go for screening? (I) Once in lifetime (II) Once in Three years (III)

045). Would you be ready to take her to the screening point? (I) Yes --- (II) No (III) don't know

046) Do you have preference to who screens your wife? (I) Yes --- (II) No --- (III) don't know

SECTION E: FACTORS THAT WILL ENHANCE MEN'S SUPPORT FOR SCREENING

(047). Do you feel knowing more about cervical cancer screening will help you support you spouse better? (I) Yes --- (II) No --- (III) don't know

(048). Would you want to be educated more on cervical cancer preventive strategies (I) Yes) --- (II) No --- (III) don't know?

Tick any of these that can enhance your support for wife to go for screening

S/N	STATEMENT	(YES)	(NO)	CODE
049	Attitude of healthcare giver			
050	Awareness creation on the disease			
051	Knowledge of screening centres			

State 3 other factors that will enhance your support for spouse to go for screening

052 _____

053 _____

054 _____

How do you prefer the screening done?

OPTIONS	STATEMENT	RESPONSE
055	Health care provider collects specimen from vaginal	
056)	Self collection of the specimen from Vaginal	
(057)	Collection of specimen from vaginal by husband	

58) if you prefer a health care provider to screen your spouse which sex would you prefer
(1) Male (11) female (111) don't know

(059). Why do you have the preference (1) cultural issue) (11) religion (111) personal

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APPENDIX IV

**FOCUS GROUP DISCUSSION GUIDE(FGD)
(For Qualitative data and indepth information collection)**

<u>S/N</u>	<u>Question</u>	<u>Follow-up Question</u>
1	What do we understand by the term Sexually transmitted diseases?(<i>Kini amo nipa aisan ibalopo</i>)	Who exactly can have STI's? (<i>Tani o le ko ariun STI?</i>)
2	What have we heard about human papilloma virus? (<i>Kini a ti gbo nipa kokoro human papilloma</i>)?	How is it transmitted? (<i>Bawo ni o se n tan ka?</i>)
3	What have we heard about cervical cancer? (<i>Kini a ti gbo nipa cervical cancer?</i>)	And how does it come about? (<i>Bawo ni o se n je-o?</i>)
4	How can you prevent it? (<i>Bawo ni o se dena re?</i>)	What do you know about screening for Cervical Screening?(<i>Kini o mo nipa ayewo fun cervical?</i>)
5	What role does screening for the disease play? (<i>Ipa wo ni ayewo fun aisan yi nko?</i>)	Why have you not asked your spouse to go for screening? (<i>Kilode ti o ti se fun aya re ko lo fun ayewo?</i>)
6	where can one get screening services? (<i>Nibo lall lo se ayewo?</i>)	where ? (<i>nibo</i>)
7	How would you prefer your wife to be screened? (<i>Bawo lo se fe ki o se ayewo fun ayawo re?</i>)	By who? (<i>Tani yio se?</i>)
8	Which woman can have cervical cancer (<i>Obinrin wo ni o le ni sejere enu ilo amof?</i>)	What will be your reaction if your wife has cervical cancer ? (<i>Bawo ni o se ti ti huna re ba ni ni cervical cancer?</i>)

9	Why such reaction? Kini idi ti o fi tara?	State reasons (So awon idi yi)
10	How willing are you to support your wife for screening Se o fe ran iyawo re lowo fun ayewo	What are your reasons(Kini idi?)
11	What can make you send your wife for screening Kini o le mu o yanda iyawo re fun ayewo	Give example (Se apere)

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APPENDIX V: QUESTIONNAIRE

DEPARTMENT OF HEALTH PROMOTION AND EDUCATION

FACULTY OF PUBLIC HEALTH

COLLEGE OF MEDICINE, UNIVERSITY OF IBADAN, IBADAN OYO STATE

Emi _____ akeko postgraduate ti unifasiti Ibadan, college of medicine, faculty of public health, Ibadan, Oyo state, Nigeria. Mo n se iwadi nipa iha ti awon okunrin ko ati imo won nipa cervica cancer screening. ni ijoba Ibadan North east LGA, Ibadan Nigeria. Abajade eto yi yio ran wa lowo lati se eto ti o peye lati dawo aisan yi duro.

Ese sun aduroti.

Date.....

Questionnaire no.....

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

- 1) Age as at last birthday in years (*Kini ojo a oju ni gbata e se ibi yin keyin*) _____
- 2) Educational qualification (iwe melo wo lea) (I) Primary (*Alakobere*) (II) Secondary (*Girama*) (III) tertiary (*Iwe giga*) (IV) no formal education (*nko kank nra*)
- 3) Ethnicity (*Eyawa ni e ti wa*) (I) Igbo (II) Yoruba (III) Hausa
- 4) Marital status (*Nje e ti so igbe yawa*) (I) married (*mo ti gbe yawa*) (II) separated (*nko si nile pelu i yawa mi*) (III) widow (*yawa mi ti ku*) (IV) Single (*nko ti gbe yawa*)
- 5) Religion (*Esin wo ni e rin*) (I) Christian (*kristiani*) (II) Muslim (*muslim*) (III) Traditional (*esin abalaye*)
- 6) Marriage Type (*Nje e ni ju ti owo kan lo*) (I) Monogamy (*deenj*) (II) Polygamy (*deenka*)

SECTION B: MEN'S KNOWLEDGE ON CERVICAL CANCER SCREENING
(IMO AIIWON OKUNRIN NIPA IYEU FUN JEJERI ENU ILE OMO)

	STATEMENT	OPTIONS	CODE	SCORE
008.	Cervical cancer is a disease that can affect men (<i>Jejere enu ile omo ni awon ti o le mu</i>)	(I) Any Woman (<i>Gbogbo al'arin</i>) (II) Teenage girls (<i>Al'arin</i>) (III) Spouses		

		(omidan) (IV) Don't know (Nko mo)		
009.	Cervical cancer is a disease that affects the <i>(ajere enu ile omo ni arin il mu)</i>	(I)The cervix of a woman (Cervix obinrin) (II)The breast of a woman (Oyi obinrin) (III)The heart of a woman (Okon obinrin) (IV)don't know (Nko mo)		
010.	The disense cervical cancer is caused by <i>(Kini o fa arin yi)</i>	(I) Virus (kokoro) (II)Flies (kokoro) (III)Mosquitoes (e/on) (IV)Don,t know (Nko mo)		
011	What is the best way to prevent cervical cancer? <i>ona wo lo dara ju lati dena arin cervical cancer)</i>	I)Bathing just after sex (I'e lehin ibalopa) (II)Screening for the Disease (Se ayawo) (III)Drinking much water before sex) (Ilu omi topo ki o to ni ibalopa) (IV)Don't know (Nkomo)		
012.	Early detection through screening can <i>(Alimo lasiko nipa arowo lo)</i>	I) Kill someone (Pa)nn) (II)Makes treatment easier(k Iwosan jafaru) (III)Increases infection (Jeki ison posi) (IV)Don't know (don't know)		
013.	Screening is only for <i>(Ayawo un fun)</i>	I)Married women (Adelede)		

		(I) Every sexually active woman (Obinrin ti o ba mi ibatopo) (II) Promiscuous women (onisekase) (III) Don't know (Nko mo)		
014.	screening becomes necessary if the woman is (ayewo se Pataki ti obinrin ba ni)	(I) Diabetic (Arun sugu) (II) Hypertensive (Arun efe riru) (III) None of the above (Kosi Kuntan) (IV) Don't know (Nko mo)		
015.	which of the following is not a form of cervical cancer screening (ewo ninu eyi ni kiise ona ayewo fun jejere enu ile omo)	(I) Visual inspection with acetic acid (Iyewo pelu aside) (II) Pap smear test (III) Blood sugar test (Iyewo suga) (IV) Don't know (Nko mo)		
16	State 2 symptoms of cervical cancer (Daruho ami mejl tafi lo do jejere enu ile omo mo)	I) _____ II) _____		
18	State 2 risk factors of cervical cancer (Daruho Ewu mejl jejere enu ile omo)	I) _____ II) _____		

SECTION C: MEN'S DISPOSITION TO CERVICAL CANCER SCREENING: (ATTITUDE)(IHA TI AIWON OKUNRIN KO SI AYEWỌ FUN JEJERE ENU ILE OMO) Please kindly indicate on a 4-scale whether you Agree (A), or Disagree (D), Strongly disagree (SD) to the following statements.

S/N	STATEMENT	A Mogba	SA Mogba gan	D Mio gba	SD Mio gba ran	CODE
021	I cannot tolerate another person putting hands into my wife's vaginal in the name of screening (Mi o le gba ki oro elomiran ki owo si oju ara iwawo ni nitori awawo)					
022	My wife can only go for screening if she sees the need (Iyinwo mi le fun ayewo ti o ba ro wi pe o nilo re)					
23	I can persuade my spouse to go for screening (mo ro iynwo mi ko lo ayewo)					
024	I can send my wife for screening (Mo ti ran iwawo ni fun ayewo)					
25	I have not sent my wife for screening (mi o ti ran iyawo ni)					
26	I think Cervical cancer screening is necessary (mo ro pe ayewo jejere enu ile omo se Palaki)					
027	I expose my partner to HPV infection at every sexual intercourse (Nigban ki gba ti ma ba ni ibalopa pelu enikeji mi ni mo n si enikeji ni sile fun eniyan ti ko aarin na).					
028	My circumcision completely protects my partner from HPV infection (O kolu ni ni eyi dnabo bo enikeji ni)					

SECTION C—MEN'S DISPOSITION TO CERVICAL CANCER SCREENING (PERCEPTION)

IIATI AIYON OKUNRIN KOSI SISE AYEWO FUN JEJERE ENU ILE OMO Please kindly indicate on a 4-scale if you Agree (A)1, strongly agree SA(2), or Disagree (D)3, Strongly disagree(SD)4 to the following statements.

	STATEMENT	A mogba	SA Mogbo can	D miogba	SD Miogbram	SCORE
031	My wife or any woman I know can never have cervical cancer (Ayawo mi tabi obirin ultran ti mo mo ko le ni jejere enu ile omo)					
032	Cervical cancer is a punishment from the gods to promiscuous women (Jejere enu ile omo je ajiya ese lati owo awon orisa fun awon obirin ti on se ase nase tabi oni nobikiri)					
033	Cervical cancer is not a serious disease (Jejere enu ile omo kii se arun to le)					
034	Unfaithful women are the ones to go for Screening (Awon obirin ti o nira nobi ni oye ki won se ayawo)					
035	Screening is another strategy of doctor to collect money from us (Ayawo je ogbon awon dokita lati gba lowo lowo)					
036	Screening is just a waste of time (Ni ko le ro wipe a ni lo ayawo, afisiko s'ofe lasan ni)					
037	I cannot labour or transmit HPV virus, so why should my wife go for screening (Ni ko le ni kokoro HPV, kini lili ro ti ti mo ni jo si ayawo)					
038	Screening actually saves my wife from the pain of cervical cancer (Ayawo gan ni jo gba huu ni lowo orora ti o ru mo jejere enu ile omo)					
039	Screening saves me from being a widower by not losing my wife to death due to cervical cancer (Ayawo jo ran ni lowo lili ma ke padanu ti mo ni si jejere)					

SECTION D: MEN'S WILLINGNESS TO SUPPORT SCREENING (ERO NI'ON OKUNRIN NI PA SISE ATIL EYIN FUN IYAWO HOYI TI SE IYEWO)

- 042) Will you give your consent for your wife to go for cervical cancer screening (Nje o le sowo si ki iyanwo re se ayewo fun kokoro IIPV)? (I) Yes (beeni) ----- (II) No (beeko) ----- (III) don't know (nko omo)-----
- 043) If it is needful to pay for screening, would you be ready to support her financially. (Ti o ba nilo lati san onwo fun ayewo iyawo re nje o setan lati ran lowo?) (I) Yes (beeni)----- (II) No (beeko)----- (III) I don't know (nko omo)
- 044) How often would you support her to go for screening (Alafu odun meta ni o le se atileyin re fun lati lo se ayewo)? (I) Once in lifetime (eko ni gbese aya) (II) Once in Three years (eko odun meta) (III) nko omo
- 045) Would you be ready to take her to the screening point (Nje o se tan lati mu iyawo re lo si ibid ayewo?) (I) Yes (Beeni)----- (II) No (beeko) (III) don't know (nko omo)
- 046) Do you have preference as to how and who screens your wife (Nje o ti le mi owo kan labi eni kan ti o wa o ki o se ayewo fun inwo re)? (I) Yes (beeni)----- (II) No (beeko)----- (III) don't know (nko omo)

SECTION E: FACTORS THAT WILL ENHANCE MEN'S SUPPORT FOR SCREENING (OJUSE TIYO JE KI NI'ON OKUNRIN FI OI'O SI AYEWO)

- 047) Do you feel knowing more about cervical cancer and its screening will help you support you spouse better (Nje o le ro ni nje ni mo nipa jeferu enu olo omo aro ti ni ayewo fun iyanwo re)? (I) Yes (Beeni)----- (II) No (Beeko) (III) don't know (nko omo)
- 048) Would you want to be educated more on cervical cancer and its preventive strategies (Nje o se lati ni imo ni nipa aisan jeferu enu ile omo)? (I) Yes (Beeni)----- (II) No (Beeko)----- (III) don't know (nko omo)

Tick any of these that can enhance your support for your wife to go for screening

(Duruko ohun ti yoo ran lowo lati se atileyin ti o lo fun inwo iyawo)?

S/N	STATEMENT	(YES)	(NO)	CODE
049	Attitude of healthcare giver (inu ire owo on asho lo inwo)			
050	Awareness creation on the disease (n/ra eni nje ni nipa aisan na)			
051	Knowledge of screening centres (Nje e mi thi ti se ayewo)			

State 3 other factors that will enhance your support for your spouse to go for screening
(Daruko oun meta miran ojuse tiyo je ki awon okunrin si owo si ayewo)

52-----

53-----

54-----

Q55) How do you prefer the screening done (Bawo ni o se fe ki won se ayewo haa sun iyawo re)?

OPTIONS	STATEMENT	RESPONSE	CODE
(I)	Health care provider collects specimen from vaginal (asise eletu ilera yoo gba ohun ayewo sunra re mi lati oju ora)		
(II)	Self collection of the specimen from Vaginal (Iyawo mi yoo gba sunra re lati oju ora)		
(III)	Collection of specimen from vaginal by husband (Afoo gba ohun ayewo sunra re mi lati oju ora)		

Q56) if you prefer a healthcare provider to screen your spouse which sex would you prefer (In asise abu wo ni e fe ka se ayewo sun iyawo yin)?

(I) Male (okunrin) (II) female (obirin) (III) don't know (nko nmo)

Q57). Why do you have the preference (Kin idi re ti o fi ni idahunre)

(I) cultural issue (asa) (II) religion (osin) (III) personal (O mi mi bee ni)

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TELEGRAMS.....

TELEPHONE.....



MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No.

All communications should be addressed to

the Honorable Commissioner quoting

Our Ref. No. AD 13/ 4791291

5th October, 2012

The Principal Investigator,
Department of Health Promotion & Education,
Faculty of Public Health,
University of Ibadan,
Ibadan.

Attention: Chukwueto Awelo O.J.

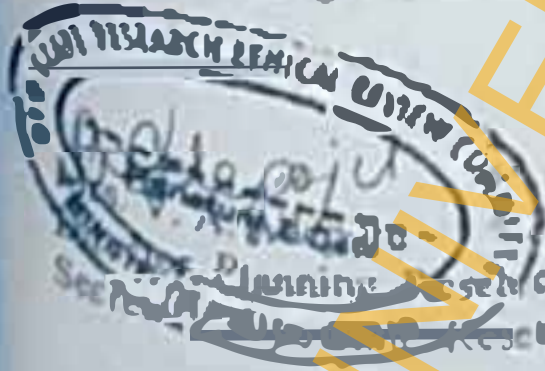
Ethical Approval for the Implementation of your Research Proposal in Oyo State

This acknowledges the receipt of the corrected version of your Research Proposal titled: "Men's Knowledge and disposition towards cervical cancer screening in Ibadan North East Local Government Area, Oyo state"

2. The committee has noted your compliance with all the ethical concerns raised in the initial review of the proposal. In the light of this, I am pleased to convey to you, the approval of committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the committee will monitor, closely, and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of the findings as this will help in policy making in the health sector.

4. Wishing you all the best,



Secretary, Research & Statistics
Research Ethical Review Committee