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Uptake of Cervical Cancer Screening Services Among Women of Reproductive Age Accessing Services at Out-Patient Department of the Rural Hospitals in Uganda Bwindi Community Hospital Case Study

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Abstract
Cervical cancer continues to pose a huge challenge on women's health worldwide especially in the poorest countries. In Uganda, cervical cancer accounts for 40 percent of all cancers and is the leading gynecological cause of death among women. The purpose of this study was to determine uptake of cervical cancer screening services among women of reproductive age. The study used cross-sectional descriptive design and was conducted from OPD at BCH, in Kanungu district. Data was collected using an interviewer administered structured questionnaire from a sample of 93 respondents who were selected using a convenient random sampling. The study revealed that overall only 24% of respondents had ever been screened for cervical cancer. With respect to demographic characteristics, uptake was lower; in the age categories 18-25 (2.8%) and 26-34 years (23.5%), and those who were not married (21%), the unemployed (22%), those of primary level of education and below (21%), the HIV negative individuals (20%) and those from a distance five kilometers and above (15.2%). Generally, uptake of cervical cancer screening services was low. There is therefore a need to come up with measures such extension of services in form of out-reaches and empowerment of lower level health facilities to do screening in order to address the issue of distance, special education packages targeting those of younger age, the unmarried, those not employed, those with lower levels of education, the HIV negative individuals so as to scale uptake of cervical cancer screening.
Keywords: Cervical cancer; cervical cancer screening

Introduction

These research paper presents the Uptake of cervical cancer screening among women of reproductive age accessing services from OPD at BCH so as to recommend evidence based strategies to enhance it. It has section of background of the study, problem statement, purpose of the study, study objectives, justification of the study, literature review, methodology, data analysis, discussion and recommendations.

1.1 Introduction

Cervical cancer has continued to pose a huge challenge on women's health worldwide especially in the poorest countries [1]. It is the second most common cancer in women, with more than 500,000 new cases occurring annually and 270,000 lives lost every year. By the year 2009, the worst hit regions were parts of Asia, Sub Saharan Africa, the Caribbean, and Central and South America with the rate of more than 40 cases per 100,000 women; compared with less than 10 per 100,000 women in North America and Europe. Cervical cancer was also reported to be the most common female cancer in East Africa affecting 44 per 100,000 women and the highest female cancer related mortality accounting for 35 per 100,000 women [2].

Cervical cancer is the uncontrolled growth of cells on the cervix [3]. Cells on the cervix begin to grow slowly and abnormally over several years usually taking 10 to 20 years for invasive cancer to develop after the precancerous lesions are identified (International Agency for Research on Cancer Organization [4]. The disease is sexually transmitted and is caused by the human papilloma virus (HPV). Thus there is a strong link between cancer of the cervix and sexually transmitted infections (STIs). Risk factors for its development include frequent births or high number of children, early sexual debut before age of 16 years, and presence of other sexually transmitted infections such as Herpes Simplex and Human Immune deficiency Virus (HIV) infection [5,6].

One of the most effective ways of preventing and controlling cervical cancer is screening which contributes to early diagnosis [6]. Success of cervical cancer screening initiatives depends on high participation of the target population, which in turn is largely influenced by individual related factors especially demographic variables [3,7,8,9]. According to World Health Organization (WHO) only paying attention to influence of demographic factors, can scale up uptake of cervical cancer screening by over 25%. Although, cervical cancer is easily detectable and curable in its early stages, only 5% of women in developing countries undergo screening for cervical cancer compared to over 40% in developed countries, and 70% or higher in countries that have shown marked reduction in incidence and prevalence of cervical cancer [2]. It is therefore not surprising that in Africa, where screening rates are very low the majority of women present at late stages with invasive and advanced disease.

In sub-Saharan Africa, the magnitude of the problem has been under-recognized and under prioritized compared to competing health priorities such as HIV& AIDS, tuberculosis and malaria. 34.8 new cases of cervical cancer are diagnosed per100, 000 women annually and 22.5% per 100,000 women die from the disease [10].

Uganda has one of the world's highest cervical cancer incidence rates of 45.6 per 100,000 women and cervical cancer deaths at 25 per 100,000 women [2]. According to WHO ,cervical cancer continues to be the leading gynecological cause of death among Ugandan women. 80% of women with cervical cancer are diagnosed with late-stage disease that is difficult to treat. Cervical cancer accounts for 40% of all cancers in Uganda [11]. However, the actual magnitude of this type of cancer for Uganda might be higher since most of the cases are never reported or registered. The Ugandan Ministry of Health (MOH) in partnership with Non-Governmental Organizations (NGOs) such as Program for Appropriate Technology in Health (PATH) Uganda, the World Health Organization (WHO), and private not for profit (PNFP) hospitals have established organized cervical cancer screening programs and have set up screening centres in some regions of the country [12]. However, the number of women turning up for cervical cancer screening services have remained persistently low in a number of areas while in others no efforts have been made to obtain such information. In most catchment areas of the rural hospitals like Bwindi Community Hospital (BCH), literature on uptake of cervical screening services is scarce. It is therefore against this background that the researcher undertook a study to determine uptake of cervical cancer screening services so as to recommend evidence based strategies to enhance its uptake.

1.2 Problem Statement

Uganda has one of the world's highest cervical cancer incidence rates of 45.6 per 100,000 women and cervical cancer deaths at 25 per 100,000 women [2]. According to WHO, cervical cancer continues to be the leading gynecological cause of death among Ugandan women. 80% of women with cervical cancer are diagnosed with late-stage disease that is difficult to treat [11]. According to BCH annual report 2014/2015, there was an increase in the diagnosis of women with cervical cancer and its treatment; about 3% of the women were screened had pre-cancer lesions [13]. Among all the cancers, cervical cancer is the only type that can be totally prevented if there is regular screening and treatment of its pre-cancerous lesions [12, 5]. Although several studies were done on the uptake of cervical cancer screening services in other places, almost all have been conducted in urban settings. In the catchment area for BCH, no such a study has been done before and the trend of cervical cancer screening service uptake remains unclear. This study was therefore undertaken to determine uptake of cervical cancer screening services so as to recommend evidence based strategies to enhance it. This will subsequently reduce cervical cancer related deaths.

1.3 Purpose of the Study

The purpose of this study was to determine uptake of cervical cancer screening services among women of reproductive age accessing services from OPD at BCH so as to recommend evidence based strategies to enhance it.

1.4 Objectives of the Study

- To determine the general level of uptake of cervical cancer screening services among women of reproductive age accessing services from OPD at BCH.
- To determine the uptake of cervical cancer screening services among women of reproductive age accessing services at OPD in relationship to demographic characteristics.

1.5 Research Questions

- What is the percentage of women in the reproductive age accessing services from OPD at BCH that have ever screened for cervical cancer?
- What is the uptake of cervical cancer screening services among women of reproductive age accessing services at OPD in relation to demographic characteristics?

1.6 Justification

Despite the face of shrinking resources, Uganda continues to experience a challenge of preventable diseases such as cervical cancer. The disease was targeted in the 2010-2014 health sector strategic plan with an aim of achieving 80% coverage by 2015 [12]. However, the strategy was never realized. Understanding uptake of cervical cancer screening services was critical for the designing of evidence guided strategies that are best suited for the situation of BCH and Uganda at large. Although uptake of cervical cancer screening services has been studied extensively in many parts of the world, a knowledge gap still exist most especially Kanungu District. This study intended to determine uptake of cervical cancer screening services. This information is crucial in that it will help nurse leaders in formulating policies. These will promote uptake of cervical cancer screening services

with respect to each demographic characteristics leading to prevention through early screening and, management of cases in early stages. It will also provide practicing nurses with baseline information on how to evidently address challenges related to uptake of cervical cancer screening services.

2. Literature Review

2.1 Overview of Cervical Cancer Screening

Screening for cervical cancer is the most preventive measure and its purpose is to detect the early pre-cancerous lesions and treat them before they can develop into invasive cervical cancer. Among all the cancers, cervical cancer is the only type that can be totally prevented if there is regular screening and treatment of its pre-cancerous lesions [5,12].

There are several methods available for detection of several forms of pre cancers and these include direct visual inspection of the cervix aided by chemicals like 5 percent acetic acid and iodine (visual inspection with acetic acid [VIA] and visual inspection with Lugols iodine [VILI]), which cause recognizable color changes. Other screening techniques, like cytology (conventional Pap smears, liquid-based cytology) and HPV DNA testing, and treatment of pre-cancer using cryotherapy or the loop electrosurgical excision procedure (LEEP), are helpful in reducing the burden of cervical cancer [5].

Every woman should be screened at every opportunity of contact with a health professional, at postnatal clinics, STI clinics and gynecological clinics. For women who are sexually active and HIV positive annual screening from age 18 to 35 years is advised; thereafter every 3 to 5 years, provided the test results remain negative[3]. In developed countries where resources are allocated to prevention initiatives, the prevalence and mortality of cervical cancer has fallen between 30% and 75% [3].

2.2 General level of Uptake of Cervical Cancer Screening Services

Uptake of cervical cancer screening is still demanding yet it is critical in prevention of this deadly disease. A cross-sectional study in India that aimed at determining factors influencing uptake of cervical cancer screening, 84.98% of the participants had never been screened. Only 11.62% reported one previous Pap smear whereas only 2.82% had undergone screening two times [14].

Other studies done among women have also revealed low uptake of screening. A study done in Kisumu County, Kenya whose objective was to assess the perceived risk of cervical cancer and factors influencing cervical cancer screening uptake, revealed that only 6% of the 388 women surveyed had been screened [15].

In another cross-sectional study in Eldoret Kenya, whose objective was to find out the perceptions on cervical cancer risk, barriers to screening and previous screening status, only 12.3% of 219 participants had screened before [16]. The percentage of women who have undergone at least one pap smear test in their lifetime (pap smear coverage) has been found to be 15.7%. [17].

Comparably, in a descriptive cross-sectional study in Uganda, findings revealed that only 43 of 900 respondents (4.8%) had ever been screened for cervical cancer, 58.1% had undergone the procedure within the last 12 months whereas only 32.5% had ever been screened two or more times [18]. In Kanungu district, particularly the catchment area for BCH literature on uptake of cervical cancer screening services is scarce. Thus the stand for the researcher to undertake this study so as to bridge the gap

2.3 Uptake of Cervical Cancer Screening Services in Relation to Demographic Characteristics.

Demographic characteristics include age, marital status, level of education, occupation, religion, number of children among others. With regard to education level, several studies have established that women with high screening rates have a high level of education [19]. However, women with high education may not necessarily seek screening (20); thus, additional factors must be considered. In cross-sectional study in Eldoret Kenya, whose objective was to find out the perceptions on cervical cancer risk, barriers to screening and previous screening status women who were of secondary level of education and above were almost five times likely to use cervical cancer screening services than those of primary level and below[16].

Regarding age of screening, rates are substantially lower in younger women aged 20-29 years and elderly women aged 60 years and above [19]. Another study done in Kenya on risks and barriers to cervical cancer screening among 219 women attending maternal and neonatal child health (MNCH)-family planning clinic at the Moi teaching and referral hospital found that women over 30 years were more likely to have screened for cervical cancer than younger women [16].

With respect to marital status studies have found that unmarried and widowed women are less likely than married women or women living with a partner to obtain screening[19]. Contrary to the above, some studies have found that single women are more likely than married women to have pap screening [21]. A cross sectional study done in India also indicated that being married is positively associated with uptake of cervical cancer screening, all women who reported at least a single episode of previous screening were married. Relatedly, results revealed that early marriages were associated with higher frequency of being screened for cervical cancer.

This puts women in such category at an advantage since early resumption of sex Intercourse is a risk factor for cervical cancer[14].

According to a study by Singh and Badaya, utilization of cervical cancer screening services was found to be directly proportional to parity of the women. This could be because women of higher parity have had more preventive contacts with reproductive health services that may in turn increase their awareness and responsiveness towards cervical cancer screening [14]. Contrary to the above findings, a study by Ndejjo et al. revealed that respondents who lived in households with five or less members were twice more likely to have undergone cervical cancer screening [18].

Regarding employment status, studies conducted in India, South Africa and Uganda found out that older women who are of low socio-economic status and un employed were less likely to participate in cervical cancer screening [22,11]. According to Mutyaba et al. having money increases the probability of utilizing cervical cancer screening and access to information and utilization of health care services [7]. Similarly, a descriptive cross-sectional study in Uganda by Ndejjo, found out that women were who were civil servants were four times more likely to utilize cervical cancer screening services that those that never had formal employment [18]. In Kenya a study done in Eldoret at the Moi teaching and referral hospital found that 11.4% of the participants lacked the finances to pay for the test and they identified this as the reason why they do not go for screening [16]. Comparably, a study by Ansink et al. (2008) in Bangladesh also reported the high costs of screening services as one of the most common barriers to screening [23]. All these indicate that being formerly employed could be positively associated with cervical cancer screening.

On the other hand, several studies have strongly associated HIV with cervical cancer. Fortunately, the HIV positivity seems to be certainly associated with uptake of cervical cancer screening services. For example a study by Ndejjo et al. found out that women who had ever tested for HIV were four times more likely to have undergone cervical cancer screening compared to those who had never done the test [18].

Regarding religion, a study by Nicky revealed an interesting finding of cultural / religious beliefs that Muslim women can only be seen naked by their husbands. Therefore, they were less likely to utilize cervical cancer screening services than women of other religious dominations [24].

According to Jo, Bartosze, Marlow, and Wardel, long distances to the cervical cancer screening services also reduce the likelihood of women accessing screening [25]. A cross-sectional, community-based survey revealed that poor transportation is an additional problem [26].

All the above indicate that demographic characteristics have varying impact on uptake of cervical cancer screening thus the need to determine uptake of cervical cancer screening in relationship to demographic variables basing on BCH as the study area.

3.0 Methodology

3.1 Introduction

This chapter presents the methodology of the study. It describes the study design, the setting and the site selection. It also describes the target population, the sample size as well as the sampling procedure. The inclusion and exclusion criteria have also been explained with a brief description of the data collection process. This chapter also discusses data analysis, ethical consideration and validation of the instrument as well as exclusion of bias.

3.2 Study Design

This was a descriptive cross-sectional study on cervical cancer screening uptake among women of reproductive accessing services from OPD in BCH. The study was carried out over a period of one week (from 4th to 10th July, 2016) following approval by BCH's research committee. A cross-sectional descriptive study was used to enable the researcher gather information on the women of reproductive age accessing services at OPD of BCH at a single point in time. It was also cost and time effective.

3.3 Study Setting and Site Selection

The study was conducted in OPD of BCH. BCH is a 112 bedded Hospital that renders out-patients and inpatients services to the Kanungu sub-district community including a comprehensive maternal package. Bwindi Community Hospital is a Church of Uganda (Anglican) Hospital under the Diocese of Kinkiizi. It is staffed by a team of 121. These include; doctors, nurses, midwives, other health workers and support staff. The hospital was founded in 2003 by Scott and Carol Kellermann. It began as an outreach clinic under a tree, and has grown into a 112-bed Hospital providing health care and health education services to a population of over 100,000 people. The Hospital began with a special mission to help the Batwa pygmies who were displaced from the Bwindi Impenetrable Forest after it was made a national park in 1993. The hospital has a defined population of Sub-counties of Kayonza, Kanyantoro and Mpungu in Kanungu District. It is located in Mukono parish kayonza sub-county Kanungu district about 200m away from Buhoma town along the road that runs to Bwindi impenetrable

National park.

3.4 Target Population

The target population for this study comprised of all women of reproductive age from 18 to 49 years accessing services at OPD in BCH.

3.4.1 Sample size determination.

A minimum sample size was calculated using a standard formula for known population size for a cross sectional study by Reid et al. (1991). The formula is given below,

$$n = \frac{N}{[(1+N(e)^2]}$$ *Where,*

n= sample size of adjusted population,

N= population size

e= accepted level of error and was considered as 0.05.

$n = 120 \div [1 + (120 \times 0.05^2)]$

$n = 92.3 = 93$ *participants*

The average number of women seen at BCH weekly according monthly hospital records was 120. This was retrieved from the hospital information management system.

3.4.2 Sampling procedure.

The study employed a convenient sampling method. Women aged 18 years and older but less than 50 years who presented for consultation at the hospital out-patient department during the week of data collection were approached individually as they came in. The purpose of the research and procedure would be explained to each of them and those who consented to participate were interviewed by the researcher and the assistants that had previously been trained. The interviewers ensured that no woman was interviewed more than once by asking if they had previously been interviewed. Convenient sampling method was used so as to minimize delay in getting services. Data was collected both during morning and evening hours so as to enhance opportunity for most women to participate in the study.

3.4.3 inclusion criteria.

Women getting health care services at OPD of BCH, who were aged 18 to 49 years and consented to participate in the study, were enrolled.

3.4.4 exclusion criteria.

All women aged below 18 and above 49 years and those that did not consent were excluded from the study.

3.5 Definition of Variables

These were dependent and independent variables

3.5.1 independent variables.

These were demographic characteristics that included; age, marital status, level of education, occupation, religion, number of children, HIV status and distance from nearby health facility that offers cervical cancer screening services.

3.5.2 Dependent Variable:

This was uptake of cervical cancer screening. In this study, uptake of cervical cancer screening was defined as the proportion (percentage) of women aged 18 to 49 years who have ever been screened for cervical cancer.

3.6 Research Instruments

Data was collected using a structured interviewer administered questionnaire that consisted of two parts. Part one focused on demographic factors whereas part two concentrated on uptake of cervical cancer screening services Uptake of cervical cancer screening was assessed by asking a question that required a "Yes" or "No" response depending on whether one had ever been screened or not.

3.7 Data collection procedure

Data was collected over a period of one week. Research assistants were recruited to assist in the data collection. These research assistants were third year students undertaking a diploma in nursing. They were trained by the principal researcher on the study tool, the aims and objectives of the study as well as the ethical considerations, how to conduct questionnaire interviews (interviewer-administered questionnaire) to minimize information bias. Permission to conduct the study was sought from administration of BCH. After an explanation of the purpose of the study and obtaining written consent from the participants, the data collection was started. The researcher and research assistants introduced themselves to the participants and underscored that respondent participation was voluntary and that they would not be victimized in any way. Confidentiality was assured by ensuring that their names do not appear anywhere in the questionnaire.

3.7.1 Data management and quality assurance.

Before data collection, the questionnaire was pre-tested among women aged 18 to 49 years who were attending to their admitted babies in pediatric ward in BCH. The questionnaire was then revised to ensure it collected information to answer the research objectives. Research assistants were trained prior to data collection. After collection of data, the questionnaires were checked for completeness by the researcher, sealed in envelope, put in the suit case and would only be picked at the time of analysis.

3.7.2 Data analysis.

Collected data from the questionnaire were sorted, edited and coded. Coded data were analysed using a computer package called Microsoft excel, used for addition, division and construction of tables and graphs reflecting the respondent's responses in frequencies and percentages. Analysed data was presented in frequency/percentages, tables, pie charts and graphs. For some variables association with uptake of cervical cancer screening was examined using an odds ratio.

3.8 Ethical Considerations

Proposal was presented to research committee of BCH after which an introduction letter was got from the school administration and taken to the Executive Director of Bwindi Community Hospital. An informed consent was obtained from each respondent after explaining the purpose of the study. Anonymity was ensured through use of numbers known only to the subjects as opposed to their name. Confidentiality was guaranteed through restricting data access to only those who were directly involved in the study. In addition no study subject was coerced and they were all guaranteed freedom to decline participating in the study.

3.9 Limitations of the Study

During the process of data collection, the researcher employed a convenient sampling method. This could have denied some women an opportunity to participate in the study. However, the researcher attempted to overcome this by collecting data on different days both during morning and afternoon hours. In addition, the study was carried out in a hospital setting and therefore the findings may not be generalizable to other contextually different areas. Cervical cancer screening status was self-reported and could have been affected by social desirability. However, potential bias was minimized by asking respondents when they were last screened which ensured reliability and validity of the data. Lastly, the tool was not translated to the local language apart from the questions being translated directly during interview process. This may have led to some misinterpretation of some of the questions or words by the research team. To mitigate this, local research assistants were used who understood Rukiiga and they were also trained on how to ask the questions.

3.10. Dissemination of results

The copies of the research findings were submitted to; Bwindi Community Hospital (study site), Uganda Nursing School Bwindi (Training school), Uganda Nurses and Midwives Examination Board.

4.0 Results

4.0 Introduction

This section of the study contains the presentation of the study findings and analysis. The findings have been presented in form of tables, graphs and pie charts.

4.1 Demographic characteristics of the respondents

Table 1: Demographic characteristics of the respondents ∑= 93

Characteristics	Classification	Frequency	Percentages%
Age in years	18-25	36	38.7
	26-34	34	36.6
	35-41	13	13.9
	42-49	10	10.8
	Total	**93**	**100**
Marital status	Single	18	19.4
	Married	64	68.8
	Separated	4	4.3
	Widowed	6	6.4
	Divorced	1	1.1
	Total	**93**	**100**
Level of Education	Primary	51	54.9
	Secondary	22	23.7
	Tertiary	13	13.9
	None	7	7.5
	Total	**93**	**100**
Occupation	Student	9	9.7
	Civil servant	5	5.4
	House wife	15	16.1
	Self employed	10	10.7
	Peasant	50	53.8
	Others (Casual laborers)	4	4.3
	Total	**93**	**100**
Religion	Protestant	59	63.4
	Muslim	1	1.1
	Catholic	30	32.3
	Others(Born-gains ,Bishaka and Seventh Day Advantest's)	3	3.2
	Total	**93**	**100**
Number of children	None	16	17.2
	1-3	45	48.4
	4-6	23	24.7
	6 & more	9	9.7
	Total	**93**	**100**
HIV status	Positive	10	10.8
	Negative	79	84.9
	Unknown	4	4.3
	Total	**93**	**100**
Distance from Home to nearby health facility	≤ 5km	47	50.5
	>5km	46	49.5
	Total	**93**	**100**

Majority of the respondents 38.7 %(n=36) were between the ages of 18-25years followed by 36.6% (n=34) in the age range 26-34 whereas the least number 10.8% (n=10) where those from 42 to 49 years.

More than a half of the respondents 68.8% (n=64) were married, 19.1% (n=18) were single and the rest of the respondents 4.3%, 6.4% and1.1% were separated, widowed and divorced respectively.

Of all the women interviewed, 54.9% (n=51) had a primary level of education, 23.7% (n=22) had secondary level education, 16.1 %(n=13) had tertiary level education and 3.2% of the respondents had never been to school for any formal education. Regarding employment status, 83.9 %(n=78) of the respondents were unemployed.

The majority of the respondents 63.4 %(n=59) were protestants followed by Catholics who made up 32.3% (n=30) of the entire sample. With respect to HIV status, more than three quarters (84.9%) were sero-negative whereas almost an equal proportion was from within or above five kilometers.

4.2 General levels of uptake of cervical cancer screening

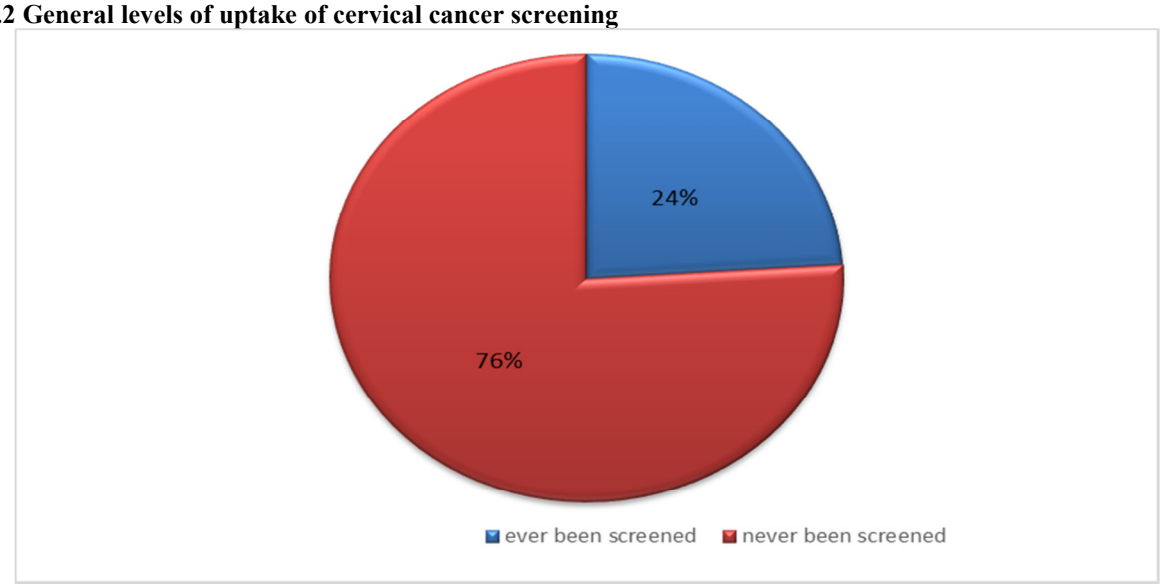

Figure 1 : general level of uptake of cervical cancer screening

Findings indicated that less than one-quarter (24%) of the respondents had ever been screened for cervical cancer.

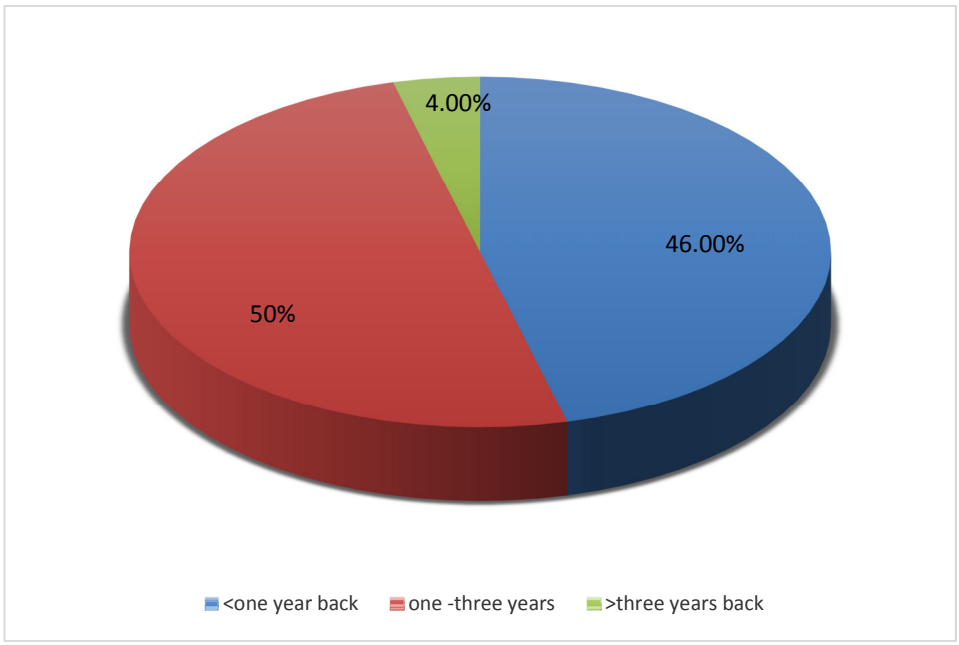

Figure 2 : Last time respondents had cervical cancer screening done

Of the 22 respondents who had had cervical cancer screening, half of the respondents 11(50%) had had cervical cancer screening done between 1-3 years ago; 10(46%) had screening done less than one year back. The rest had been screened for cervical cancer more than three years back (Figure 2).

4.3: Uptake of cervical cancer screening in relation to demographic characteristic

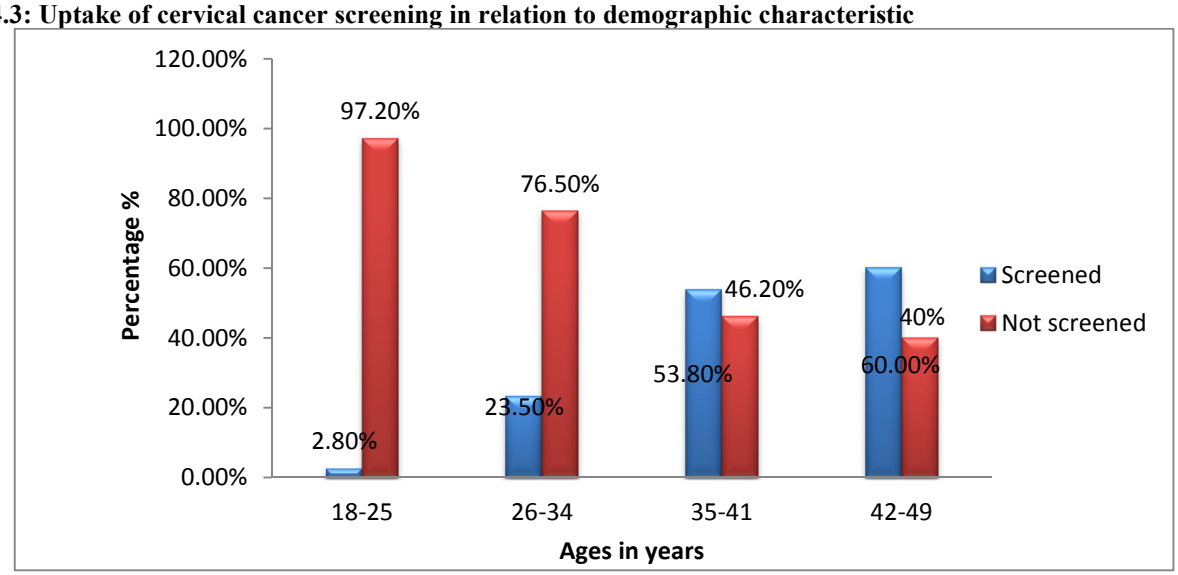

Figure 3 : Uptake of cervical cancer screening in relation to age ∑ = 93

Uptake of Cervical cancer screening services increased with age. It was higher in the older age category 35-41(53.8%) and 42 to 49 years (60%) and lowest in the age category 18-25 years.

Table 2: Uptake of cervical cancer screening in relation to marital status

∑ =93

Marital status	Screened %	Never screened %
Married	16 (25%)	48 (75%)
Not married	6 (21%)	23 (79%)
Total	22 (24%)	71 (76%)

Among 64 respondents that were married, 16(25%) had ever been screened for cervical cancer whereas 6(21%) of the 29 that were not married had been screened before. Uptake of cervical cancer screening among the married (25%) was slightly higher than among those who were not married (21%).

Table 3: Uptake of cervical cancer screening in relation to employment status

∑ =93

Employed status	Screened %	Not screened %
Employed	6 (32%)	13 (68%)
Not employed	16 (22%)	58 (78%)
Total	22 (24%)	71 (76%)

Out of the 74 respondents who were not employed, greater than three-quarters 58(78%) had never been screened for cervical cancer. Comparably, for respondents who were employed, also almost three-quarters 13 (68%) had never been screened. Generally uptake of cervical cancer screening was higher among those employed (32%) than those who were not employed (24%).

Table 4: Uptake of cervical cancer screening in relation to level of education ∑ =93

Level of education	Screened %	Not screened%
Primary/never attended school	12 (21%)	46 (79%)
Secondary/tertiary	10 (29%)	25 (71%)
Total	22 (24%)	71(76%)

Findings indicated that uptake of cervical cancer screening was higher among those who were of secondary or tertiary level of education (29%) than those of primary and below (21%).

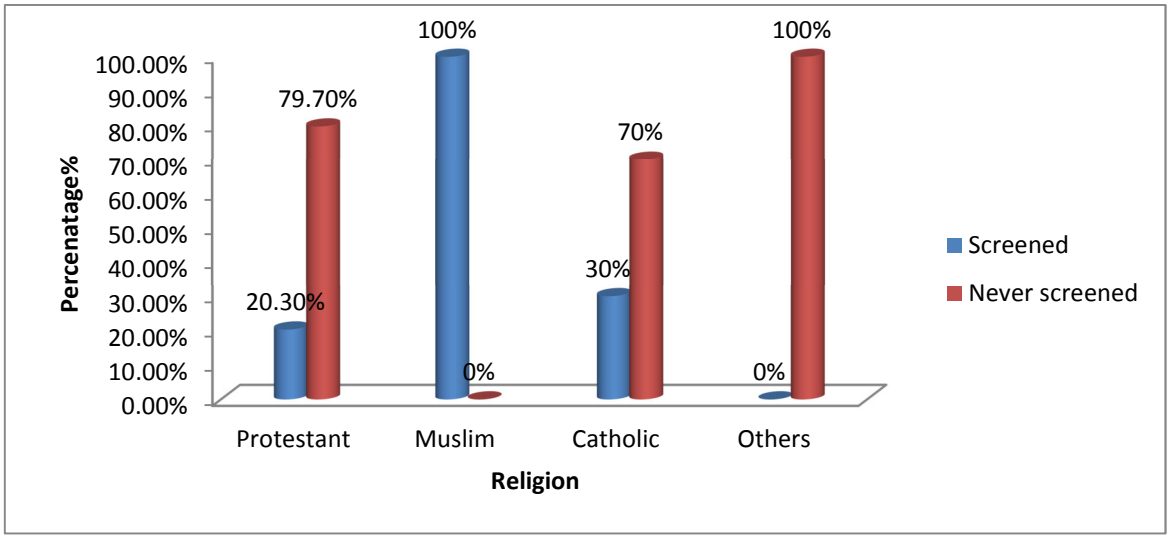

Figure 4: Uptake of cervical cancer screening in relation to Religion

Others included; Pentecostals, Bishaka and Seventh Day Adventists

Uptake of cervical cancer screening was highest among Muslims (100%) and lowest among other religious groups that included Born-gains, Bishaka and Seventh Day Adventist

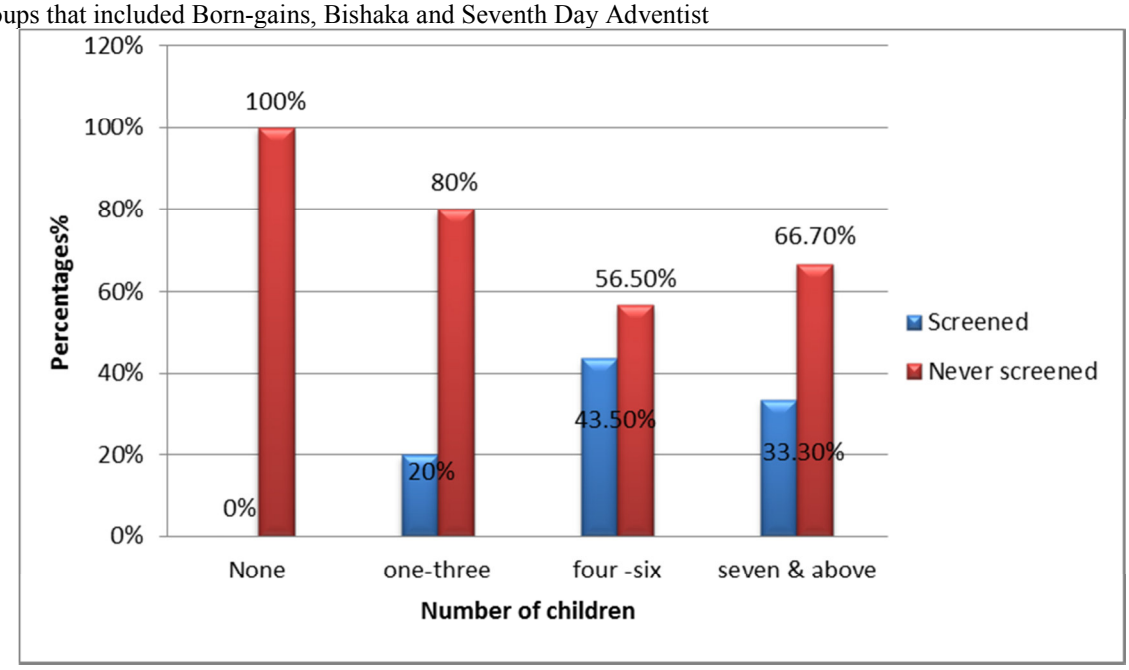

Figure 5 : Uptake of cervical cancer screening in relationship to number of children

∑ = 93

Uptake of cervical cancer screening was highest among those with four to six children (43.5%) followed by those with seven children and above (33.3%). It was lowest among those with no child (0%).

Table 5 : Uptake of cervical cancer screening in relationship to HIV status

∑ =93

HIV status	**Screened %**	**Not screened %**
Positive	5 (50%)	5 (50%)
Negative/Unknown	17 (20%)	66 (80%)
Total	22 (24%)	71 (76%)

Results indicated that uptake of cervical cancer screening was higher among HIV positive respondents (50%) compared to 20% among those who were HIV negative.

Table 6 : Uptake of cervical cancer screening in relationship to distance from home to nearby health facility that offers cervical cancer screening services

∑ =93

Distance	Screened %	Not screened %
≤ 5km	15 (31.9%)	32 (68.1%)
>5km	7 (15.2%)	39 (84.8%)
Total	22 (24%)	71 (76%)

Results indicated that of the 47 respondents that were from a distance of five kilometers or less, 15(31.9%) had ever been screened for cervical cancer. Comparably, out of 46 respondents that were from a distance of five kilometers and above only 7 (15.2%) had ever been screened. Uptake of cervical cancer screening was higher among those from five kilometers and less (31.9%) compared to those from five kilometers and above (15.2%)

5. Discussion, Conclusion and Recommendations

5.1 Demographic data

Majority of the respondents 38.7 %(n=36) were between the ages of 18-25years. This could because at this age most women still have babies who cannot seek services on their own and therefore majority could have been accompanying their babies for treatment. More than a half 68.8% (n=64) being married could be because of the target population that consisted of women between 18-49years since at this age it is legally acceptable to be married.

On the other hand, majority 54.9% (n=51) of the respondents having a primary level of education could be because of the study setting that was entirely in rural area. Similarly, majority of the respondents 50(53.8%) being peasants could be because of the location of the study which was in a rural setting with fewer opportunities for business and other forms of formal employment. Almost two-thirds of the respondents 63.4 %(n=59) were protestants. This could be because the study setting is under the foundation of Anglican Church. Almost half of the respondents 45(48.8%) having one to three children could be because of the age group of the majority of the respondents that allows them to have an average number of children.

An almost equal proportion being from within (50.5%) or above five kilometers (49.5%) could be because Bwindi is at a hospital level. Therefore even those at greater distances come in to get specialized services that cannot be offered in other lower level health facilities.

5.2 General levels of uptake of cervical cancer screening

Findings from the study indicated that, of 93 respondents, only 22 (24%) had been screened for cervical cancer before. Comparably, others studies done among women of reproductive age have revealed similar or even lower uptake of cervical cancer screening services. For instance, a study done in Kisumu County, Kenya whose objective was to assess the perceived risk of cervical cancer and factors influencing cervical cancer screening uptake, revealed that only 6% of the 388 women surveyed had been screened [15]. In another cross-sectional study in Eldoret Kenya, only 12.3% of 219 participants had been screened before [16]. In addition, in a descriptive cross-sectional study in Uganda by Ndejjo, Mukama, Musabyimana and Mosoke, findings revealed that only 43 of 900 respondents (4.8%) had ever been screened for cervical cancer. Rates in this study being higher could be as a result of the study setting which was a hospital [18]. Alternatively, the variation could also be an indicator of the difference in the strategies that are employed to scale up uptake of cervical cancer screening across the areas of the studies. Generally, such low rates of indicate that majority of the respondents still stand a high possibility of progressing to cancerous lesions or advanced disease stage undetectably. According to Bosch et al., screening for cervical cancer is the most preventive measure and the purpose of the screening is to detect the early pre-cancerous lesions and treat them before they can develop into invasive cervical cancer [5].

5.2.1: The last time cervical cancer screening was done.

Of the 22 respondents who had had cervical cancer screening were asked last time when they were screened for cervical cancer. Half of the respondents 11(50%) had had cervical cancer screening done between 1-3 years ago; 10(46%) less than one year back and the rest (4%) above three years. Comparably, in a descriptive cross-sectional study in Uganda by Ndejjo, Mukama, Musabyimana and Mosoke, findings revealed that majority 58.1% had undergone the procedure within the last 12 months [18]. According to WHO, women who are sexually active, annual screening from age 18 to 35 years is advised; thereafter every 3 to 5 years, provided the test results remain negative. This implies that 46% of the respondents would fall in the recommended time frame irrespective of whether they are sexually active or not. Besides this, more than 50% of the respondents re-sought services timely provided they remained negative for cervical cancer [3].

5.3: Uptake of cervical cancer screening services in relationship to demographic characteristics.

In this study, uptake of cervical cancer screening was higher in the age category 35-41(53.8%) and 42 to 49

years (60%) and lowest in the age category 18-25 years. This could be because as the age increases the number of deliveries by each woman is likely to increase yet it is a risk factor for cervical cancer. Therefore it could be that mothers with increasing age are aware of being at high risk. Uptake of cervical increasing with increasing age is contrary to other studies that found out rates substantially lower in younger women aged 20-29 years and elderly women aged 60 years and above [19]. However, the study findings are agreement with those in another study done in Kenya on risks and barriers to cervical cancer screening among 219 women attending MNCH-FP clinic at the Moi teaching and referral hospital which found that women over 30 years were more likely to have screened for cervical cancer than younger women [16].

Uptake of cervical cancer screening among the married (25%) being higher than among those who were not married (21%) concurs with across sectional study in India by Singh and Badaya where all women who reported at least a single previous screening were married [14]. Rates of cervical cancer screening being higher among the married could be because they get support from their husbands. Alternatively, it could be that those who are married have more children and therefore usually visit health facilities for their own care and that for their children. Therefore this exposes them to a number of health education sessions that subsequently trigger them off to utilize screening services.

Results also indicated that uptake of cervical cancer screening was higher among those employed (32%) than those who were not employed (24%). This could be because being employed empowers an individual with financial support. This subsequently helps them to overcome other barriers to uptake of cervical cancer screening such as distance. Similar results have been documented in studies conducted in India, South Africa and Uganda which found out that older women who are of low socio-economic status and un employed were less likely to participate in cervical cancer screening [11]. Comparably according to Mutyaba et al. having money increases the probability of utilizing cervical cancer screening and access to information and utilization of health care services [7].

Results also revealed that uptake of cervical cancer screening was higher among those who were of secondary or tertiary level of education (29%) than those of primary and below (21%). This concurs with findings in studies done by Liao et al and Fernandez et al, who found that women with high screening rates had higher levels of education. However, on the other hand the findings were not in agreement with Abotchie and Shokar, that women with high education level may not necessarily seek screening [19, 20]. Uptake of cervical cancer screening being higher among those with better levels of education could be because such individuals are empowered to use different sources of information such as internet, newspapers among others. Therefore it could be that such individuals easily access facts related to cervical cancer screening hence increased uptake.

Findings also indicated that uptake of cervical cancer screening was highest among Muslims (100%) and lowest among other religious groups that included Pentecostals, Bishaka and Seventh Day Adventists. This could be due to number of respondents who were Muslims since a small number can make the percentage to appear bigger. Alternatively higher rates of uptake of cervical cancer screening among Muslims could be due to the fact that Islamic religion accepts multiple partners yet multiplicity of sexual partners is a risk factor of cervical cancer. Therefore it could be that more Muslim women are aware of such risk and engage in cervical cancer screening so as to minimize it. Findings in this study were contrary to those by Nicky, which revealed an interesting finding of cultural / religious beliefs that Muslim women can only be seen naked by their husbands. The variation in these studies could be as a result of difference in health education package that is given to overcome such beliefs across the two countries [24]. Alternatively this could a reflection of the difference in numbers that were enrolled in the two studies. None of the respondents among other religious groups which included born Again, Bishaka and Seventh Day Adventists being screened for cervical cancer could be due to their religious beliefs that are in disagreement with uptake of cervical cancer screening.

Uptake of cervical cancer screening was highest among those with four to six children (43.5%) followed by those with seven children and above (33.3%). It was lowest among those with no child (0%). Uptake being higher among those with a big number of children this could be because women of higher parity have had more preventive contacts with reproductive health services that may in turn increase their awareness and responsiveness towards cervical cancer screening. Contrary to the above findings, a study by Ndejjo et al., revealed that respondents who lived in households with five or less members were twice more likely to have undergone cervical cancer screening [18]. This difference could be as a result of differences in the extent of emphasis put on cervical cancer screening across the two areas of study.

Uptake of cervical cancer screening being higher among those with a positive HIV sero-status could be because being HIV positive, the immunity is lowered down thus putting them at a risk of cervical cancer. It could be that HIV positive individuals are aware of their being at increased risk. Therefore it is likely that they engage in cervical cancer screening in order to minimize such risks. Similar findings have been documented by Ndejjo et al., in a study which revealed that women who were HIV positive were four times more likely to undergo cervical cancer screening compared to those who had never done the test for HIV [18].

Uptake of cervical cancer screening was higher among those from five kilometers and less (31.9%)

compared to those from five kilometers and above (15.2%). These findings concur with Jo, Bartosze, Marlow, & Wardel., that long distances to the cervical cancer screening points reduce the likelihood of women accessing screening services [25].

5.4 Conclusion and Recommendations

5.4.1: Conclusion

Uptake of cervical cancer screening among women of reproductive age was low. Rates are lower; in the age categories 18-25 and 26-34 years , among those who were not married , the unemployed, those of primary level of education and below , among those who were from either Borne again, Bishaka or seventh day Adventists by religion , among those with no child , the HIV negative individuals and those from five km and above. There is therefore a need to come up with measures such extension of services in form of out-reaches for those from far distances, special education packages targeting those of younger age, the unmarried, those not employed, those with lower levels of education, the HIV negative individuals so to scale uptake of cervical cancer screening.

5.4.2: Implications to Nursing

The study findings show that majority of the respondents had not screened for cervical cancer in their life time, which is a negative aspect to nursing. When asked reasons for not screening, they said there were not aware that cervical cancer screening exits and where it takes places. This was an indicator of inadequate knowledge hence there is a need health workers to educate women on the importance cervical cancer of screening, health workers should have knowledge updates on new concepts and cervical cancer should be integrated in nursing curricula so that nurses become effective educators

5.4.3: Recommendations

There is a need advocate for formulation of policies that focus on enhancing uptake of cervical cancer screening services such as extending services near to people for example through outreach activities, empowering lower level units to perform cervical cancer screening

Health workers should come up with special education package targeting those of younger age, the unmarried, those not employed, those with lower levels of education, the HIV negative individuals so to scale uptake of cervical cancer screening

A similar study should be under taken primarily targeting those that have not come to seek services from the hospital or health facility.

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Appendix 1: Questionnaire

Kindly fill in the questionnaire below. The information given will be treated with utmost confidentiality and will only be used for the purposes of this study.

Client Number…….

Uptake of Cervical Cancer Screening Services among Women Aged Between 18 and 49 Years Accessing Services at OPD in Bwindi Community Hospital

Demographic Data

1. **Age** (Tick as appropriate)
   a. 18– 25yrs [ ], b. 26 – 34yrs [ ], c. 35 – 41yrs [ ], d. 42 – 49yrs [ ]
2. **Marital status**
   a. Single [ ] b. Married [ ] c. Separated [ ] d. Widowed [ ] e. Divorced [ ]
3. **Level of education**
   a. Primary [ ] b. Secondary [ ] c. Tertiary [ ] d. none [ ]
4. **Occupation**
   a. Student [ ] b. Civil servant [ ] c. House-wife [ ] d. Self-employed [ ] e. peasant [ ]
5. **Religion**
   a. Protestant [ ] b. Muslim [ ] c Catholic [ ] d. Others specify [ ]
6. **Number of children given birth to**
   a. None [ ] b. 1-3 [ ] c. 4-6 [ ] d. 6 &more [ ]
7. HIV status a) Positive b) Negative c) Unknown
8. **Distance from home to nearby health facility that offers cervical cancer screening services**
   a. ≤ 5km b. > 5km

Uptake of Cervical Cancer Screening Services

9. **Had you ever been screened for cervical cancer?** a) Yes b) No , If yes answer question 9
10. When were you last screened? a) < one year back b) 1-3 years back c) > 3 years back

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