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Original Research Article

Knowledge, Attitudes and Practices of Cervical Cancer Screening among Women Attending Mabumba Rural Health Centre of Mansa District in Luapula Province, Zambia: *A Case of Mansa District in Luapula Province, Zambia*

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Abstract: Cervical cancer is one of the leading causes of cancer-related deaths among women globally, particularly in low-resource settings such as Zambia. Despite the availability of free cervical cancer screening services, the uptake remains low. This study explores the knowledge, attitudes, and practices (KAP) regarding cervical cancer screening among women attending Mabumba Rural Health Centre in Mansa District, Zambia. A cross-sectional survey was conducted using structured questionnaires among 110 women aged 18–45 years. Data was analyzed using STATA version 14. The findings revealed that while some women had heard of cervical cancer, knowledge about its causes, risk factors, and screening methods was generally low. Attitudes towards screening varied, with many expressing fear or uncertainty about the procedure. The study also identified multiple barriers to screening, including cultural beliefs, financial constraints, and lack of awareness. The results highlight the need for targeted health education and community engagement initiatives to improve cervical cancer screening uptake in rural Zambia.

Keywords: Cervical cancer, Screening, Knowledge, Attitude, Practices, Zambia.

1. INTRODUCTION AND BACKGROUND

1.2 Introduction

Cervical cancer is a preventable disease that remains a significant public health concern, particularly in low-income countries like Zambia. According to the World Health Organization (WHO), Zambia has one of the highest cervical cancer mortality rates in the world. Human Papillomavirus (HPV) infection is the primary cause of cervical cancer, yet early detection through screening can significantly reduce morbidity and mortality. However, despite free screening services, many women in Zambia do not utilize them.

This study aims to assess the knowledge, attitudes, and practices related to cervical cancer screening among women attending Mabumba Rural Health Centre in Mansa District. Understanding these factors will help policymakers and healthcare providers design effective interventions to increase screening uptake and improve early detection of cervical cancer.

1.3 Background

Cancer of the cervix uteri is ranked the fourth most common cancer among women worldwide and the leading cause of gynecologic cancer death in the less developed regions (Bray *et al*., 2018). In 2018, there were an estimated 570,000 new cases and 311,000 deaths due to cervical cancer and the majority of these deaths occurred in sub-Saharan (Bray *et al*., 2018). It is worthwhile to note that cervical cancer is the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women, with an estimated 604,000 new cases and 342,000 deaths worldwide in 2020 (Sung *et al*., 2021). This shows an increase in new cases and new deaths from 2018 to 2020.According to WHO, Zambia has the third highest number of cervical cancer cases globally, with 65.5 cases per 100 000 women and 43.4 deaths per 100 000 women recorded. Furthermore, Cervical cancer is the most common cancer in Zambia accounting for 23% of all cancer cases (Chansa *et al*.,

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2019). WHO reports that this translates to an estimated 3100 new cases and 1900 deaths annually. Furthermore, cervical cancer is the commonest female cancer in Zambia (Chansa *et al*., 2019), with 1,839 associated deaths in 2018 (ICO/ IARC HPV Information Centre, 2019).

Cervical cancer prognosis and clinical outcomes are significantly improved by screening and testing, making it possible to diagnose and treat cervical cancer in the early stages (WHO, 2021). However, even when diagnosed early, in many low resource settings like Zambia, there is a long turnaround time to treatment (Kapambwe *et al*., 2020). Regular screening at different ages is now recommended in Zambia and other SSA countries as a secondary prevention strategy for cervical cancer Parham *et al*., 2015; WHO, 2021). According to WHO guidelines, it is recommended that from the age of 21 years to 29 years, women have a Pap smear every 3 years Every 5 years for those from 30 to 65 years combined with HPV testing (WHO, 2021).

However, after 65 years, it is recommended that women who have had regular screening can stop screening (Campos *et al*., 2017). Chanda *et al*., found that although cervical cancer early screening and treatment can decrease morbidity and mortality, most women in Zambia report to the hospital late (Chanda *et al*., 2020; WHO, 2020). This could partly be explained by a lack of awareness, knowledge, and poor women's attitude towards cervical cancer screening. Between 2019 and 2023, Zambia targets to provide 2,275,621 women with cervical cancer screening services and attain a national coverage rate of 65% (WHO, 2020).

Therefore, this study aims to explore the knowledge, attitudes and practices towards cervical cancer screening among women attending Mabumba Rural Health Centre in Mansa district in Zambia.

1.4 Statement of the Problem

Cervical cancer is a major public health concern worldwide, and early detection through regular screening is critical for reducing morbidity and mortality. To prevent the spread of cervical cancer in Zambia, the Cervical Cancer Prevention Program (CCPPZ) was started in 2006. Under this program, nurses were trained to provide free cervical cancer screening via visual inspection with acetic acid (VIA) and treatment with cryotherapy if indicated. Peer educators are employed to facilitate community awareness, counteract misconceptions and myths and provide patient support functions. At Mabumba RHC (research site), the facility has a trained nurse to provide cervical cancer screening and the Lay psychosocial councilor under ART to disseminate the cervical cancer screening messages. During antenatal clinic, under five children clinic and during outreach services the women are given information about cervical cancer screening which is offered free at the clinic and the dangers of late diagnosis of cervical cancer. Despite the availability of effective screening methods, many women are not undergoing cervical cancer screening, and there are various barriers to screening uptake. To address this problem, this research will explore women's knowledge, attitudes, and practices to cervical cancer screening in order to identify strategies to increase screening uptake and ultimately reduce the burden of cervical cancer.

The table below outlines the low turnout of women towards cervical cancer screening. As seen from the table, with the few numbers that came through for cervical cancer screening, the number of women who tested for positive is alarming as it tally 50% with those tested negative.

Table 1: Cervical cancer screening trend at Mabumba RHC between April 2023 and August 2023

Months	Montly Targets	Women Screened			Percetage (%)
		Negative	Positive	Total	
April 2023	113	0	2	2	1.7
May 2023	113	2	2	4	3.5
June 2023	113	1	2	3	2.6
July 2023	113	3	5	8	7
August 2023	113	24	17	41	36
September 2023	113	1	2	3	2.6
October 2023	113	0	1	1	0.8
Total	**791**	**31**	**31**	**62**	**7.8**

Source; Mansa-DHIS, 2023

The table above outlined the cervical cancer screening trend at Mabumba rural health centre which show low number of women who come for cervical cancer screening. The total number of 62 women was screened for cervical cancer in the months of April 2023 to October 2023 representing 7.8%. Of the women screened for cervical cancer, 50% tested positive which indicates the disease burden of cervical cancer. With these few numbers that were captured for cervical cancer screening we can conclude that cervical cancer is real and exist among the women in the community.

1.5 Objectives

To determine the level of knowledge, attitudes, and practices to cervical cancer screening among women 18 years and above attending Mabumba Rural health centre

The primary objectives of this study are as follows:

1. To determine the knowledge level of cervical cancer among women at Mabumba Rural health center.
2. To assess the attitudes towards cervical cancer screening among women at Mabumba Rural health center.
3. To assess the Practices towards cervical cancer screening among women at Mabumba Rural health center.

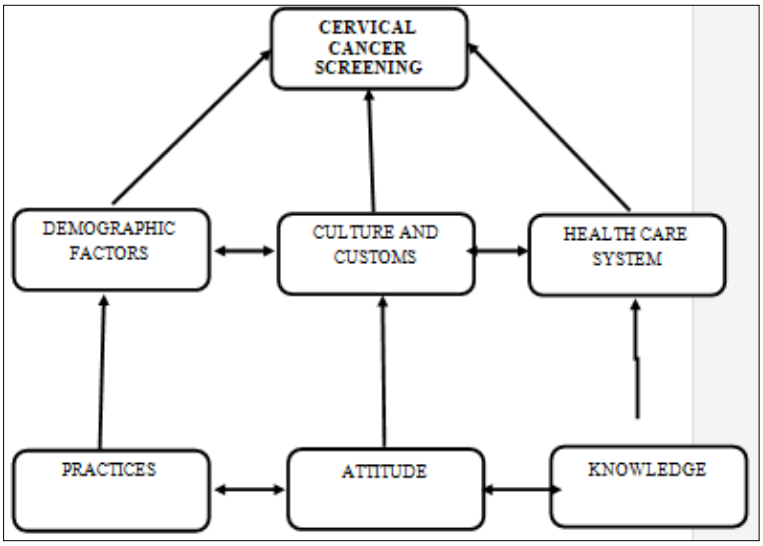
1.6 Research Question

1. What are the knowledge level on cervical cancer among women at Mabumba Rural health center?
2. What is the attitudes towards cervical cancer screening among women at Mabumba Rural health center?
3. What are the Practices towards cervical cancer screening among women at Mabumba Rural health center?

1.7 Significance

Cervical cancer is a major public health issue, and screening is an effective way to detect and prevent it. However, despite the availability of screening programs, the uptake of cervical cancer screening remains low, particularly among certain communities. Therefore, understanding the factors that influence cervical cancer screening behavior, such as knowledge, attitudes, and practices, is crucial for improving screening rates and reducing the burden of cervical cancer.

1.8 Conceptual Framework



2. LITERATURE REVIEW

2.1 Introduction

This Chapter reviewed literature using Google scholar and PubMed engines. Cervical cancer is a preventable disease through regular screening, yet its burden remains high, particularly in low and middle-income countries. Understanding the knowledge, attitudes, and practices to cervical cancer screening among women attending health facilities is crucial in designing effective interventions to increase uptake and reduce the incidence of cervical cancer, as such the literature review was done from global, regional and finally to local perspectives.

2.2 *Global Perspective*

A systematic review was conducted that examined the current literature on knowledge and attitudes regarding cervical cancer and barriers to screening for cervical cancer among women in India. Consistent themes were found throughout the literature (Vora *et al*., 2020).

This low uptake of cervical cancer screening can be attributed to a number of factors, as demonstrated by the literature, including low level of knowledge and awareness, low level of perceived risk, stigma associated with cancer, fear of cancer, cost, and familial obligations (Vora *et al*., 2020)

Knowledge of cervical cancer was found significantly greater among women aged 30–49 years, and those employed, married for > 15 years, with a university degree, or who had had 4 births or 3 miscarriages in a study conducted in Qatar, by Al-Meer *et al*., (2011). The study also showed that almost 40% had had a Pap smear test at least once and 85.5% of the rest would have a test if they were told that the procedure was painless and simple. Furthermore, over half wanted the test to be done in the well-woman clinic at the primary health care center. Knowledge and practice was inadequate among those under 30 years old, those

recently married and those with a lower education level. (Al-Meer *et al*., 2011).

A study in Saudi Arabia concluded that there was a high proportion of women with poor knowledge and awareness about cervical cancer and screening. Most women do not feel the need to undergo screening. (Algabr *et al*., 2022).

2.3 African Perspective

A systematic review and meta-analysis, by Bogale *et al.,* (2021) of studies conducted in Africa was done and reported the proportion of knowledge, attitude and practice towards cervical cancer screening. In this review, the estimated proportion of knowledge of the participants was 43.0% while the pooled estimates of attitudes and practices were 38.0% and 41.0%, respectively.

A cross-sectional questionnaire-based survey conducted among156 women aged 15–50 years in Chegutu district, in Zimbabwe found that only about 5.8% of women had undergone screening and 41% had poor knowledge regarding risk factors, groups, symptoms and prevention. Over 66% of women knew how the disease was trans-mitted and which women are at risk. Women, in particular, the less educated and non-Christians had low level of knowledge on cervical cancer and its symptoms and signs (Nyamambi *et al*., 2020).

An Institutional-based cross-sectional study was conducted among women attending a health facility in Ethiopia showed that half, (50.7%) of study participants had good knowledge. Less than half, 46.1% had a positive attitude toward cervical cancer screening. Only 6.3% of women have been screened for cervical cancer. Diploma and above education (AOR: 2.22, 95%CI: 1.32, 6.157), no idea about cervical cancer curable at an early stage (AOR: 6.23, 95% CI: 6.23 (2.77, 15.13) were significantly associated with knowledge of cervical cancer screening. Diploma and above education (AOR: 0.37, 95% CI: 0.19, 0.74) and multiple sexual partners (AOR: 0.18, 95% CI: 0.05, 0.62) were factors associated with a negative attitude toward cervical cancer screening. Positive attitude about cervical cancer screening (AOR: 2.37, 95% CI: 1.91, 6.20) was significantly associated with the practice of being screened. (Gibisa *et al*., 2022).

In another Ethiopian institutional based cross sectional study conducted among 667 Adama Science and Technology University female students in Ethiopia using a simple random sampling method to select the respondents, and a structured self-administered questionnaire for data collection, revealed that about 60.6% of the participants heard about cervical cancer, 71.7% had positive attitude towards cervical cancer screening, and only 2.2% participants were screened for cervical cancer. Lack of information about cervical cancer was the most reported reason for not attending to cervical cancer screening (Tadesse *et al*., 2022). Another study, community based quantitative study design was conducted in Adigrat town, northern Tigray Ethiopia. This study indicated that 46.4%, 53.3%, 38.1% of participants had knowledge, positive attitude, and screened on cervical cancer, respectively. (Tsegal *et al*., 2020).

Several studies have suggested that support from immediate social circles can influence likelihood of women practicing screening and agreeing to the vaccination of their children. For instance, women in Uganda who know someone who has screened have a higher chance of practicing screening themselves. Research conducted in Tanzania and Nigeria, found that decision making was influenced by a woman's partner/husband, who must support, or help make, the decision to practice prevention.

2.4 Zambian Context

In a recently published cross sectional study to explore the knowledge, attitude and practices of cervical cancer screening among HIV-infected women in public health facilities in Lusaka, Zambia, by Mukosha *et al*., (2023) showed that the overall knowledge, attitude, and practice scores of cervical cancer screening among women living with HIV were 62.4%, 91.6% and 36.5%, respectively. Overall, knowledge was positively and significantly associated with attitude and practice. Additionally, attitude and practice were significantly associated.

An analytical cross-sectional study design conducted in Kitwe of the Copperbelt province showed over three quarters (77.6%) of the respondents to have been knowledgeable on cervical cancer and screening. Majority (61%) of the respondents demonstrated a more positive attitude towards cervical cancer screening, and the overall perception level among study respondents was more positive (71.9%). The findings of this study indicated that the magnitude of cervical cancer screening was 44.8% (Daka *et al*., 2022).

A cross-sectional mixed methods study which was conducted from Lusaka's Chilenje and Kanyama compounds, indicated that less than half of the respondents (36.8%) had heard of cervical cancer, 20.7% of women had attended screening and 6.7% of the total sample had vaccinated their daughter. Knowledge of causes and prevention was very low. There was a strong association between having awareness of cervical cancer and practicing screening and vaccination. Social interactions were also found to greatly influence screening and vaccination behaviors (Nyambe *et al*., 2019)

Then in 2013, the human papillomavirus (HPV) vaccine was launched as a demonstration in Lusaka Province, (WHO, 2015), as another means of preventing the spread of cervical cancer in the country. Funded by

Gavi, the HPV vaccine Gardasil was administered using a school-based strategy targeting girls in grade 4 (aged 9 to 13 years old) and out of school girls aged 10 years old. Despite these developments, cervical cancer remains the leading cancer in Zambia. According to the Cancer Disease Hospital in Lusaka, approximately 35% of all cancers managed are cervical cancers.

Though little research targeting Zambian populations has been published, studies in various other countries have identified factors that can supposedly predict screening and vaccination practices. Among Zambian women, familiarity to vaccines in general made acceptance of the HPV vaccine higher for themselves as well as for their daughters. Similarly, having knowledge and awareness of cervical cancer resulted into positive attitudes towards the vaccine among Zambian parents/guardians and Cameroonians, (Ayissi, 2011). Based on these studies, we assumed that women who know of cervical cancer are more likely to practice screening and agree to vaccination.

In Zambia, it was found that most women discussed their screening decisions with members of their social network. This evidence suggests that women who believe they have support from their immediate social circles (partner, friends, family) are more likely to be in favor of practicing cervical cancer prevention methods.

3. METHODOLOGY

3.1 Introduction

This chapter described the methods used in the study, it included the research design, study area, study population, sample size, sample strategy, data collection technique, data management and analysis and lastly ethical considerations.

3.2 Study Design

The study design which used was a Cross sectional survey. Which involved collecting data on many variables at once such as; demographic, economic, cultural and social variables. Furthermore, the study was able to approve or disapprove assumptions.

3.3 Target Population

The target population of the study were among women aged between 18 and 45 who attend Mabumba RHC. This study was conducted in the catchment population of Mabumba RHC which has a catchment population of about 6200 people, of which 1364 are women of child bearing age, (Mansa-DHIS, 2022).

3.3.1 Inclusion Criteria

The following were included in the study:

- Women of child bearing aged between 18 and 45
- Women of child bearing age between 18 and 45 who are within the catchment of Mabumba RHC.

3.3.2 Exclusion Criteria

The following were excluded from the study:

- Women of child bearing aged between who are less than 18 and above 45 years of age
- Women of child bearing age between 18 and 45 who are not within the catchment of Mabumba RHC.

3.4 Sampling

3.4.1 Sampling Technique

Convenience sampling was used to select respondents in the study. It was use because of its simplicity of sampling and facilitated data collection. The respondents were incorporated in the study based on their availability.

3.4.2 Sample Size

The sample size of the respondents was determined using the formulae below.

$n = PQ/S.\ E^2$

A proportion of 0.5 and interval of 0.1

$S.E = 0.1/1.96 = 0.05$

$n = PQ/S.\ E^2 = (0.5 \times 0.5)\ (0.05)^2 = 100$

Therefore, the sample consisted of 110 respondents.

3.5 Data Collection

Structured questionnaire was used to collect data among the respondents. The structured questionnaire was ideal for the study because it contained options from which the respondents could choose from. Data obtained from structured questionnaire was east and quick to analyze.

3.6 Data Analysis

Following collection of data from the sample of respondent, each questionnaire was checked for accuracy by ensuring that questions were answered. The data collected was coded and computerized using STATA version 14.0. Data was analyzed using STATA and Excel.

Descriptive analysis was done to come up with the frequencies of the variables. Statistical test was done to find the effect of selected independent variable on the outcome variable where the chi-square test was used to test for significance.

The frequency tables and pie charts were used to summarize the results. Cross tabulations were used to show the relationships between variables.

3.7 Variables

The variables that were considered in the study were:

3.7.1 The Independent Variable

- Cervical cancer screening

3.7.2 The Dependent Variables

- Knowledge on cervical cancer
- Practice of cervical cancer screening
- Attitude towards cervical cancer screening

3.8 Ethical Considerations

Approval to conduct the study was sought from the University's health and research committee and ERES, then finally proceed to Mansa provincial health office and District health office for clearance.

The investigator obtained informed consent from the respondents and they were assured of the confidentiality of their responses. Furthermore, the respondents were told that there are no risks that were involved for participation in the study. The respondents were also advised that participation in the study was voluntary, and they could withdraw at any time during the study when they felt uncomfortable.

4. RESULTS

4.1 Introduction

The section highlighted the findings of the study that was designed to assess the knowledge, attitudes and practices of cervical cancer screening among women. The results were presented inform of tables, pie charts and bar charts. The variables that were considered included social demographic characteristics, knowledge, attitude and practices on cervical cancer.

4.2 Social-Demographic Profile of Respondents

Table 1, summarize the social demographic characteristics of respondents at Mabumba Rural Health Centre. A total number of 110 respondents participated in the study.

The overall mean age was 28.20 years with a standard deviation of 5.94 years. Finally the respondent with the minimum age was 19 years of age and the maximum was 43 years of age.

Table 1*:* Age of the respondents

	Gender	Observation	Percentage %	Mean	Std. Dev	Min	Max
Age	Female	110	100	28.20	5.94	19	43

Majority of the respondents (49%) had attained a secondary level of education, and 30% of the respondents had attained college/university level. Only a few respondents (12%) had attained primary level education and 7% never attended school.

Table 2: Education level of respondents

	Frequency	Percentage %
Education level		
None	8	7
Primary	14	13
Secondary	54	49
Tertiary	34	30
Total	**110**	**100**

More than half (54.6%) of the respondents were married, 31% were single, and 9% were divorced. Negligible proportions (7%) were widowed.

Table 3: Marital status of respondents

Variable	Frequency	Percentage
Marital status		
Single	34	31
Married	58	53
Divorced	10	9
Widowed	8	7
Total	**110**	**100**

4.3 Knowledge Levels on Cervical Cancer Among Women

4.3.1 Heard of Cervical Cancer

The figure showing the distribution of participants who heard of cervical cancer. The figure indicates that the majority of the participants (57%) have not heard of cervical cancer compared to those participants (43%) who heard of cervical cancer.

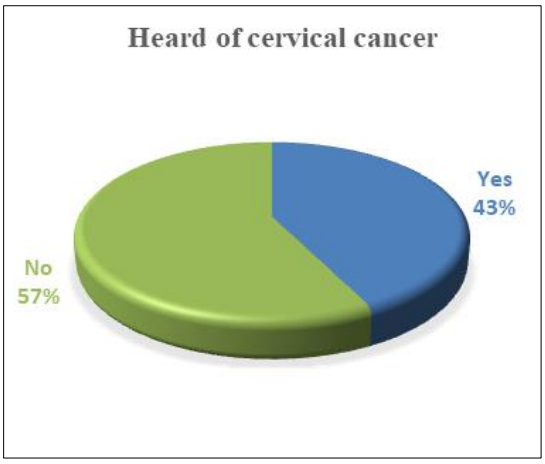


Figure 1: Heard of cervical cancer

4.3.2 Know What Causes Cervical Cancer

44% of the participants did not know the causes of cervical cancer and 29% of the participants indicated yes. Only 27% of the participants were not sure as indicated on figure 2.

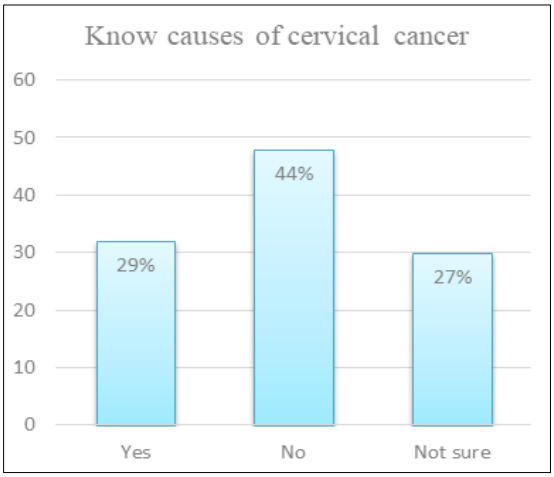


Figure 2: Know the causes of cervical cancer

4.3.3 Type of Cervical Cancer Screening Have you heard of (e.g., Pap smear or HPV test)

Figure 3 shows that 41% of the respondents knew types of cervical cancer e.g Pap smear or HPV test and 59% of the respondents indicated that they did not understand or know any types of cervical cancer screenings.

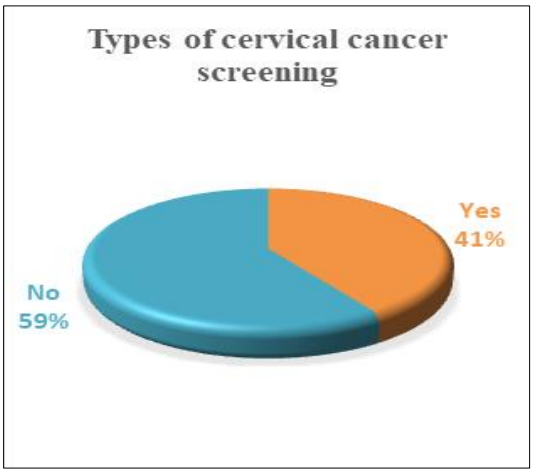


Figure 3: Types of cervical cancer screenings

4.3.4 Purpose of Cervical Cancer Screening

Figure 4 indicates that 59% of the respondents were not sure of the purpose of cervical cancer screening. Figure 4 further shows that 30% of the respondents are indicated to find out if one has a disease and 11% indicated that to the health status.

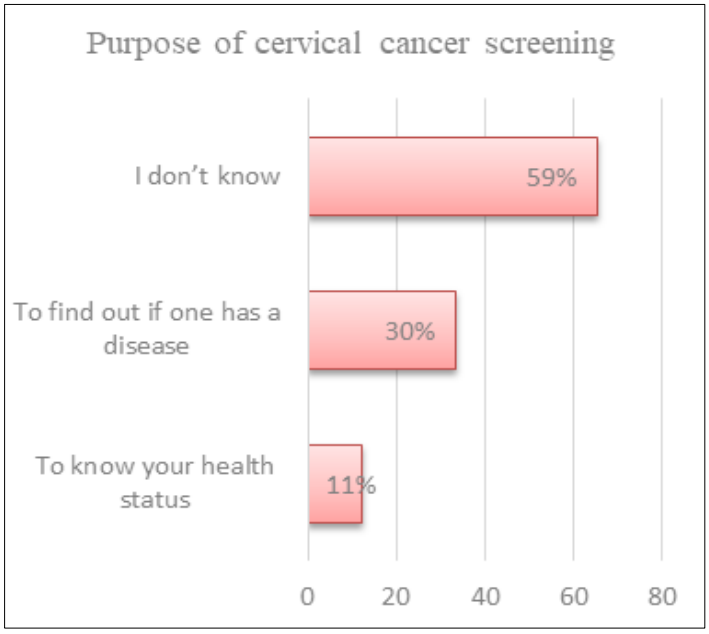


Figure 4: Purpose of cervical cancer screening

4.4 Attitudes Towards Cervical Cancer Screening

The figures showing the distribution of attitude of participants towards cervical cancer screening.

4.4.1 Importance of Cervical Cancer Screening

The figure shows that majority of the participants (59%) had indicated not important at all and (28%) participants had good attitude and indicated somewhat important. Nevertheless, the remained participants (13%) had very good attitude.

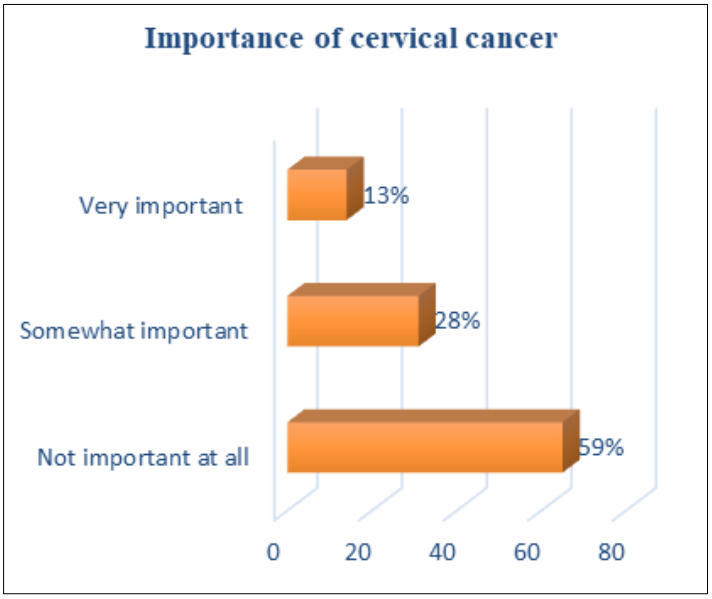


Figure 5: Importance of cervical cancer screening

4.4.2 Personally Willing to Undergo Cervical Cancer Screening in the Future

Figure 6 shows that 34% of the respondents indicated no to cervical cancer screening and 33% of the respondents indicated that they can be willing to undergo cervical cancer screening and 32% was not sure.

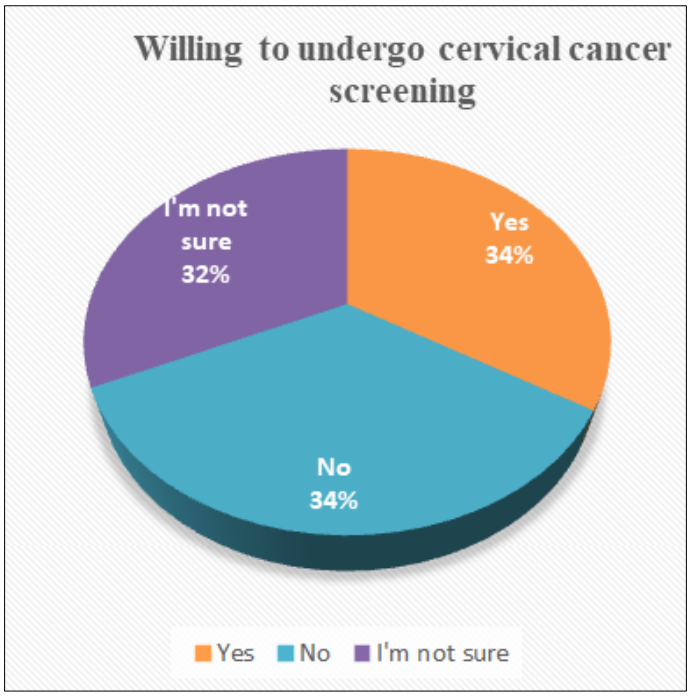


Figure 6: Willing to undergo cervical cancer screening

4.4.3 Think Cervical Cancer Screening is Important

Figure 7 shows that 34% of the respondents indicated no, they thought cervical cancer screening is not important and 34% of the respondents indicated that it is important to get screened and 32% were not sure.

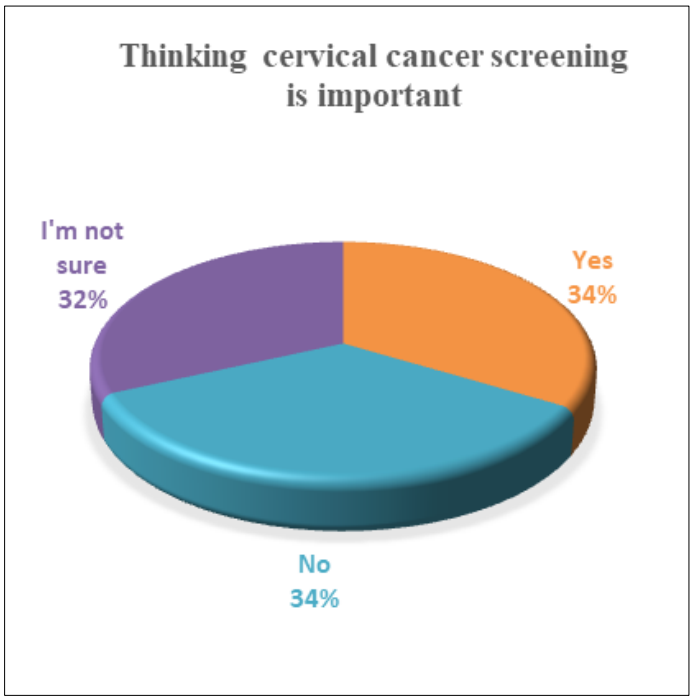


Figure 7: Thinking cervical cancer screening is importance

4.4.4 Afraid of Being Screened for Cervical Cancer Screening

Figure 8 shows that 34% of the respondents indicated no, they are not afraid of being screened for cervical cancer and 34% of the respondents indicated that yes they are afraid of cervical cancer screening and 32% was not sure.

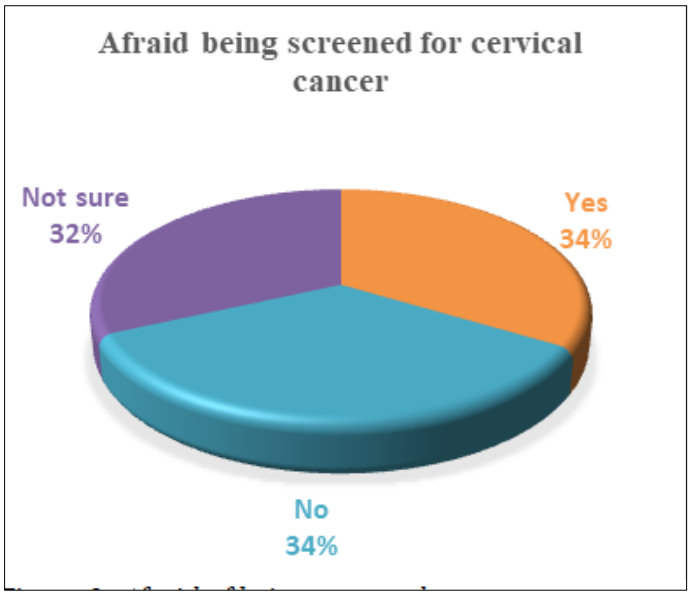


Figure 8: Afraid of being screened

4.5 Practices Related to Cervical Cancer Screening

The figure showing the distribution of practices related to cervical cancer screening among participants.

4.5.1 Ever Undergone Cervical Cancer Screening

The figure shows that results on practices related to cervical cancer screening (66%) who indicated no compared to participants (34%) who indicated yes.

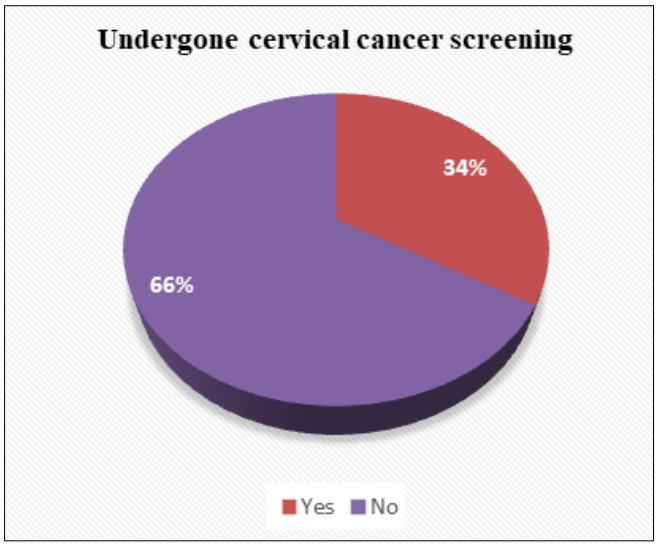


Figure 9: Undergone cervical cancer screening

4.5.2 Type of Cervical Cancer Screening

Table 3 shows that majority of the participant (65%) were not aware of the types of cervical cancer screening compared to those who were aware (19%). However, the result further shows those who at least were aware of some types of cervical cancer screening.

Table 3: Type of cervical cancer screening

Type of cervical cancer screening	Frequency	Percentage (%)
Pap smear	21	19
HPV test	9	8
VIA	6	5
VILI	2	2
None	72	65
Total	**110**	**100%**

4.5.3 The Reasons You Have Not Undergone Cervical Cancer Screening

Table 4 indicates that 34% of the respondents did not have no reason for not undergone for cervical cancer screening while 19% indicated that lack of time. The table 4 further shows that negligible proportions (8%) indicated that cost or financial.

Table 4: Reasons you have not undergone cervical screening

Reasons for not undergone cervical cancer screening	Frequency	Percentage (%)
Lack of knowledge about where to get screened	10	9
Lack of time	21	19
Cost or financial constraints	20	18
Lack of awareness about screening importance	9	8
Cultural or social barriers	12	10
None of the above	38	34
Total	**110**	**100%**

4.6 Relationship between Variables

4.6.1 Knowledge in Relation to Cervical Cancer Screening

Table 5 shows that of all the respondents that were aware of cervical cancer screening, 17.6% of the respondents showed little knowledge, 47.3% of the respondents had good knowledge and 35.1% of respondents had no knowledge about cervical cancer. The findings of the analysis indicate that women who had knowledge had higher chances of be screened than women who had no knowledge about cervical cancer screening. The statistical findings indicate that knowledge is associated with cervical cancer. This is strongly supported by statistical test of chi-square with the p-value of 0.02 which is less than the normal p-value (0.05) hence the results are not in support of the null hypothesis.

Table 5: Knowledge in relation to cervical cancer

Variable		Cervical cancer screening			Total
		No	Yes	Not sure	
Knowledge	No	0	14(17.6%)	5(19.0%)	15(12.9%)
	Yes	3(15.4%)	35(47.3%)	8(38.1%)	38(34.3%)
	Not sure	12(84.6%)	26(35.1%)	9(42.9%)	57(52.8%)
Total		**13(100%)**	**75(100%)**	**22(100%)**	**110(100%)**

4.6.2 Attitude in Relation to Cervical Cancer Screening

The attitude scores showed (23.36%) of the women stated that they were aware and had neutral or good attitude of cervical cancer screening. The results also indicated that (76.64%) of the respondents were not aware of cervical cancer screening. Nevertheless, the Chi Square Statistical test results were not statistically significant ($p > 0.05$).

Table 6: Attitude in relation to cervical cancer screening

Attitude	Cervical cancer screening			
Poor	0(0)	2(1.87)	2(1.87)	
Neutral	15(13.09)	41(37.38)	56(50.47)	
Good	12(10.28)	41(37.38)	52(47.66)	
Total	**28(23.36)**	**82(76.64)**	**110(100)**	**p = 0.638**

4.6.3 Practice in Relation to Cervical Cancer Screening

Table 5 shows that (75.7%) of the respondents of were screened were aware of it and 16.2% of the respondents that were not screened were not aware of cervical cancer. Majority of the respondents (53.8%) that did not screened were not aware. This shows that there is a relationship between practices and cervical cancer screening. The findings indicate that there is an association between practices and cervical cancer screening which is supported by a p-value of 0.03.

Table 7: Practice in relation to cervical cancer screening

Variable		Cervical cancer screening			Total
		No	Yes	Not sure	
Heard of cervical cancer	Not aware	7(53.8%)	12(16.2%)	5(23.8%)	24(22.2%)
	Aware	5(38.5%)	56(75.7%)	14(61.9%)	74(68.5%)
	Not sure	1(7.7%)	6(8.1%)	4(14.3%)	10(9.3%)
Total		13(100%)	74(100%)	23(100%)	110(100%)

5. DISCUSSION

5.1 Introduction

This chapter focused on the summary of the study findings against the backdrop of the key study variables. In this study, the researcher sought to investigate the knowledge, attitudes and practices of cervical cancer screening among women attending at Mabumba rural health center in Mansa district.

5.2 Knowledge of Women on Cervical Screening

The results of this study show that very few of the participants have heard of cervical cancer screening. This low level of awareness in this study may potentially be attributed to the fact that the research was conducted in health facilities where there is less cervical cancer screening as well as no cervical cancer screening education programs. A near in contrast to the pattern of awareness was recorded in studies conducted among women in Qatar, Johannesburg in SA, Nigeria, Nepal, and India where many of the women, were aware of cervical cancer, (Oluwole *et al*., 2018). The results of this study were similar with a study conducted in rural Lagos State in Nigeria where only a few of the participants had heard of cervical cancer. Similarly, less of Sudanese women were aware of cervical cancer, (Almobarak *et al*., 2017).

In other studies, conducted among Iraqi immigrant women living in Malaysia as well as women attending an antenatal clinic in Abakaliki Nigeria, more than half were aware of cervical cancer, (Chinaka and Nwazue, 2013). The main source of information about cervical cancer indicated by the participants in this study was community health workers, followed by a doctor or nurse. Consistent findings have been reported among women from SA (Johannesburg and Limpopo) and Nigeria, where the majority of participants recorded health care workers, doctors or nurses as their key source of information, (Maree and Moitse, 2014).

Finally, data provided for the evidence of validity of the hypothesis that women who practice screening are more likely to want to vaccinate their children. It was found that there was a strong relationship between women who practice screening and had their daughters vaccinated. Apparently, these women, who are obviously aware of cervical cancer, also see the importance of vaccinating their children.

Mabumba area is a small community within Mansa district which serves even the souranding villagers such as chisamba, Mupofwe, Moonga to mention but a few. These villages are populated with people who are of low income and their earnings are hand to mouth as such most of their time is spent in agricultural activities to make ends meet on a daily basis. As a result, there is need to ensure that programs on cervical cancer screening are strengthened to a level were even the furthest villages within the catchment area reached and sensitized on the importance of screening and early detection in the language which they are most conversant with.

Religious beliefs limit the uptake of screening. The findings in this study go against this theory in that religion showed no influence on screening decisions and showed a positive influence on vaccination acceptance. This is contrary to other countries where religion was found to limit the uptake of screening, (Masika *et al*., 2015).

In this study,The majority of the population professed to be Christians and this increased the chances of having some sort of an idea of the topic at hand. The more important the respondent regarded their religion proved to be a possible indicator of intending to go for screening. This suggests that churches in Zambia may play a role in improving screening practices, (Cunningham *et al*., 2015). One possible explanation is that some Christian denominations are known to actively educate their members on health issues including cervical cancer. These interpretations are limited because the Christian denominations of the respondents were not assessed. Beliefs between different churches vary. Equally, the accuracy of the information provided by the churches needs to be further investigated.

Women who believe they have support from their immediate social circles (partner) are more likely to be in favor of practicing cervical cancer prevention methods. The results support this hypothesis regarding women practicing screening. For screening practices, this hypothesis is supported only in the decision making of women concerning vaccinating daughters in the future, (Mbamara *et al*., 2011). It was found that women's perceived approval of partners, family and friends influenced their screening practices.

This finding is similar as in a study in Zambia which determined that women's decision to screen was often prompted by peers and family members, (Wamai *et al.,* 2012). Other studies, also suggested the influence of husbands on decision making. Furthermore, unlike men, only women were more likely to want to vaccinate their daughters if they thought their partners would approve. It can be suggested that there is a relationship between practicing preventive measures and having support especially for women. This implies that Zambian society may be a rather patriarchal society, where men have a big impact in the household. Meaning that for effectiveness of cervical cancer prevention programs, men must be included as a target population.

6.1 CONCLUSION

This chapter focuses on the summary of the study findings against the backdrop of the key study variables. In this study, the researcher sought to investigate the knowledge, attitudes and practices of cervical cancer screening among women attending at Mabumba rural health center in Mansa district. Besides,

this section also features the conclusions drawn from the investigations, as well as the study recommendations and limitations, both for policy formulation and suggestions for further research.

The pooled estimates of knowledge, attitude and practice of the current review finding was below half in different African countries. The enhancement of knowledge, attitude and practice of women will augment the comprehensive approach to cervical cancer prevention and PLOS ONE Knowledge, attitude and practice of cervical cancer screening and women infected with HIV in Africa control strategy. The current work has shed light-on how much the findings of the studies conducted in different countries on the cervical cancer and its screening were very diverse and difficult for decision making. Thus, it is essential to have the pooled estimates of different findings for decision making. Other than this, the pooled estimates are very crucial for further strengthening the strategies for prevention measure and control of cervical cancer mainly on vulnerable population like women infected by HIV. As such deliberate programs should be conducted especially in areas like Mabumba so that the women are well sensitized on the importance of cervical cancer and also local health practitioners need to be supported from time to time so that they can be able to reach out to the community.

6.3 Recommendations

In general, improvements in screening attendance and vaccine acceptance along with behavior change will have a major impact in the prevention of cervical cancer in Zambia especially in rural areas, other measures can include the following:

- Information, Education and Communication (IEC) on the importance of CCSS should be given to women during Maternal and Child health care activities and in all departments so that women can access the services at the health facility.
- Community Based Agents (CBAs) should be fully equipped with knowledge about cervical cancer and importance of CCS screening services, so that they can in turn sensitize communities on cervical cancer.
- Government should fund cervical cancer programs so that health workers can use door to door campaign strategy, radio/television sensitization on the prevention strategies of cervical cancer to the community.

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