

Facilitators and Barriers to The Access and Utilization of Cervical Cancer Health Services Among Child-Bearing Women in Lusaka District, Zambia

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ABSTRACT

Introduction: Cervical cancer is a malignancy that originates in the cervix, the lower part of the uterus that connects to the vagina, and is caused primarily by high-risk types of human papillomavirus (HPV). Globally, cervical cancer is the fourth most common cancer among women, with approximately 660,000 new cases and about 350,000 deaths reported in 2022. This study aimed to assess the facilitators and barriers influencing the utilization of cervical cancer health services among childbearing women aged 15-49 in Lusaka District of Zambia.

Methods: A cross-sectional study design was utilized to investigate the facilitators and barriers that influence the utilization of cervical cancer health services among women of reproductive age. Ethical approval was sought and obtained from Lusaka Apex Medical University Biomedical Research Ethics Committee IRB number 00799-24.

Results: The study disclosed that a large proportion of respondents were Christians (83.8%) and were not employed (45.8%). Research revealed that while 51.4% of respondents have heard about cervical cancer, a significant majority of them (67.6%) are still unaware of risk factors, endorsed frequency (73.2%) and acceptable methods (64.8%) of cervical cancer screening and the importance of early cervical cancer detection and management (73.2%). The study further disclosed that, while 64.8% of women have been encouraged by healthcare professionals, and the convenience of multiple healthcare facilities (64.8%) across the district, a significant proportion of respondents (84.5%) do not attend educational awareness campaigns on cervical cancer. Not only that, the study also disclosed that, many study participants (67.6%) are still unaware of government initiatives about cervical cancer. The study also revealed that, 64.8% of study participants have never received information about cervical cancer health services through community awareness campaigns in Lusaka District. Age, marital status, social class, religion, level of education, occupation and number of children were found to have statistically significant association with respondents' level of awareness of cervical cancer ($P < 0.05$). The study also found that, most of the study participants' significant challenges faced when accessing and utilizing cervical cancer health services include transportation issues and lack of privacy, each affecting 90.3% of study participants, and financial constraints impacting 67.9% of respondents. The study further uncovered that, 67.6% of women feel that the distance to healthcare facilities is another major obstacle to cervical cancer services accessibility and utilization. The study also disclosed that 64.8% of respondents are still unaware of available free cervical cancer health services due to lack of availability of health information and education among women of reproductive age. The study further disclosed that, most of the respondents (73.2%) do not perceive fear or anxiety about cervical cancer screening procedures to affect their willingness to utilize cervical cancer health services in the district.

Conclusion: The study found that utilization of cervical cancer health services among women of childbearing age in Lusaka District remains suboptimal, largely due to low levels of awareness, limited access to health information, and persistent structural barriers such as transportation challenges, financial constraints, distance to health facilities, and concerns regarding privacy. Socio-demographic factors, including age, marital status, education, occupation, religion, and parity, were significantly associated with awareness of cervical cancer services. In response, the study recommends that the Lusaka District Health Office, in collaboration with the Ministry of Health and the World Health Organization (WHO), strengthen community engagement, social mobilization, and health education campaigns to improve awareness of cervical cancer risk factors, screening services, and HPV vaccination. Additionally, capacity building for healthcare providers in culturally sensitive communication, patient confidentiality, stigma-free care, and the expansion of mobile outreach services is essential to address existing access-related barriers.

KeyWords: Facilitators, Barriers, Cervical Cancer, Health Services, Childbearing Women, Lusaka Zambia

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Introduction

Cervical cancer is one of the major causes of morbidity and mortality in women and the major number of deaths caused by the cervical cancer in the developing countries which constitute more than 86 percent of the total deaths. A growing body of evidence elucidates that cervical cancer is a key global health issue particularly to women of reproductive age in low- and middle-income countries where there is low accessibility to preventive measures such as vaccination against HPV and cervical cancer screening. Cervical cancer claims 266 000 women every year across the globe. In fact, it is the leading cause of death because of cancer in Eastern and Central Africa. The majority of these deaths can be prevented through the use of universal coverage of cervical cancer prevention and control programmes that can be offered to all girls vaccinated against human papillomavirus (HPV) and all at risk women with pre-cancer screening and treatment [1].

In another research study carried in Cameroon, it is made out that cervical cancer is the second most prevalent cancer among women, and it claims the highest number of lives due to cancer in most cases, due to lack of prevention. The paper has disclosed that, lack of the basic knowledge of cervical cancer in most women and men and awareness of the role of an existing screening programme as a preventive measure of cervical cancer is a significant barrier to the utilization of services associated with cervical cancer. The self-testing of HPV through self-sampling was considered a rational approach among the HCPs as long as the patients are concerned with cervical cancer prevention. The traditional chiefs were evaluated as good entry points to raise awareness as they were considered as crucial to reach not only women, but also their male counterparts [2].

Moreover, there is an increasing body of evidence to support the idea that, cervical cancer is the fifth most commonly occurring type of cancer in UAE and the fourteenth most commonly occurring type of cancer in women in Australia. Despite the established cervical screening initiatives and vaccinations in both nations, Emirati and non-Emirati women of Ras Al Khaimah and migrant women of Sydney do not have adequate access to a significant gap in accessing cervical cancer screening services. The knowledge gap, emotional, cultural, religious and psychological barriers, and the organizational factors have been identified in the formulated study. The results also invade the policy of health of the population that leads to the diminishing of the obstacles and the efforts of women who are able to visit health awareness programs and screening services [3].

One study which was carried out in Bahrain where 64 per cent (194) of the study participants had never heard about Pap smear procedure and only 3.7 per cent (11) participants had heard about human papillomavirus (HPV) vaccine. Practically, 64 percent (192) of the respondents who participated believed that Pap smear was useful in detecting pre-cancer and cervical cancer, and 44.3 percent (133) of the respondents participating in the study believed that they should have Pap smear at least once in every three years. On the practice, the researchers discovered that the number of the participants of the study that had undergone Pap smear in their lifetime was 40.7-percent (122). A majority of the respondents had to be embarrassed to be examined by a male doctor (250, 83.3%) and a small ratio of respondents had Pap smear screening when

they had not been married (69, 23.0). Also, the research in sub Saharan Africa discovered that, inadequate human capacity and infrastructures are the major factor that hinders comprehensive cervical cancer treatment in SSA [4-6].

The other study that was carried out in Zimbabwe showed that, access to free or subsidized services, transport to health facilities to obtain treatment, and housing of patients undergoing treatment were facilitators to access cervical cancer services at individual level of patients. It was also realized that, such facilitators at the society level were also fortification of the health education in communities and education of the health workers and community. Other than this, it has been established that, establishment of additional screening and treatment health facilities, increasing the capacity of facilities that are already in place, decentralizing of some services, establishing multidisciplinary groups of health workers, development and implementation of standardized guidelines, and reformation of the Acquired Immunodeficiency Virus (AIDS) levy into a fund were facilitators at the national health system level [7].

A study conducted in Botswana identified such situational factors as distance to health facilities, transportation problems and work requirements as limiting the accessibility of screening of cervical cancer among the HIV positive women. Other health system factors included unavailability of result, irregular appointment system, long queues in health facilities, shortages and poor Patient-Centredness communication skills particularly explanation and planning skills, which also impeded provision of cervical cancer services. The recognized patient variables comprised of the lack of knowledge about cervical cancer, the benefits of cervical cancer screenings, and the effectiveness of cervical cancer treatment, yet individual anxieties and myths [8].

Materials and Methods

A cross-sectional study design was employed to investigate the facilitators and barriers influencing the utilization of cervical cancer health services among childbearing women aged 15-49 in Lusaka District of Zambia. Ethical approval was sought and obtained from Lusaka Apex Medical University Biomedical Research Ethics Committee (LAMUBREC Reference number: 00799-24). A written informed consent form was obtained from the parents or guardians for adolescents aged between 15 and 17 years old which granted the researcher legal permission to access the adolescents in the health facilities in Lusaka district. Additionally, a written assent form was also obtained from the adolescents aged between 15 and 17 years themselves before the researcher proceeded with primary data collection process. Other than that, a written informed consent was obtained from the respondents aged between 18 and 49 (adults) before the researcher proceeded with primary data collection exercise. Then the respondents were given structured questionnaires to complete. The purpose of the research was clearly explained to the respondents to ensure that they understood the nature of the study to which they were consenting. Efforts were made to explain to the study participants that no harm would come to them for participating in the study, and that, they would not receive any personal benefits from the study. The study participants were also informed that participation in the study was completely voluntary and that, they were free to opt out of the study at any point without any coercion or consequence. A

brief verbal explanation of the study's aim and objectives was also provided to study participants in a group session, where possible, and individually as needed. Respondents were assured that, no information collected from them would be exposed to anyone and that all research materials would be kept securely in a research bag and only the researcher would have access to it throughout the study. The nature of the research was thoroughly explained to every study participant, and all those who consented were given the opportunity to participate by completing a structured questionnaire. Other than that, the researchers did not have any access to any information (National Registration Card Numbers, respondents' names, residential addresses, phone numbers, and passport numbers) that could identify individual participants during or after the data collection process so as to maintain confidentiality and anonymity. Respondents were also informed that the estimated time required to participate in the study would be approximately 10–15 minutes. Apart from that, the researcher was also trained in cultural sensitivity issues so as to prevent misunderstandings or unpremeditated disrespect towards the traditional beliefs of study participants. Also the data collection tool was evaluated by my supervisor in order to ensure content validity. The pilot study was also conducted at Kamwala clinic in order to assess the consistency and reliability of the data collection tool. Kamwala clinic was excluded from the main study in order to avoid selection bias. Also, cronbach's alpha was used to authenticate the consistence and reliability of the questions in the data collection instrument on the facilitators and barriers to cervical cancer health services utilization. The proposal was also presented to the Faculty of Nursing and Midwifery Sciences at Lusaka Apex Medical University for peer evaluation to obtain expert feedback, constructive critique, methodological validation, and recommendations for improvement. A simple random sampling method was used to select the respondents which accorded every study participant an equal chance to be selected for the study. The total sample size for this study was 321. Primary data was collected using a structured questionnaire with closed-ended questions administered to women of childbearing age (15–49) who visited randomly selected health facilities to seek health services from 01/07/2024 to 30/08/2024. The collected primary data was thoroughly examined for any missing values, unusual data points, and adherence to normal distribution patterns. Then it was entered into the master sheet. The collected data was then analyzed using the Statistical Package for Social Sciences (SPSS version 28) and the results were presented in tables and charts. Multivariate logistic regression analysis was used to assess the relationships between socio-demographic characteristics and the parameters of facilitators and barriers to the uptake of cervical cancer health services in this population with statistical significance established at $P < 0.05$.

Results

Table 1: Demographic Data

VARIABLE	FREQUENCY	PERCENTAGE
AGE		
15-20	43	13.4
21-30	122	38.0
31-40	104	32.4
41-49	52	16.2
MARITAL STATUS		
DIVORCED	61	19.0
MARRIED	165	51.4
SINGLE	43	13.4
WIDOWED	52	16.2
SOCIAL CLASS		
LOWER CLASS	174	54.2
MIDDLE CLASS	104	32.4
UPPER CLASS	43	13.4
RELIGION		
CHRISTIAN	269	83.8
MUSLIM	52	16.2
OCCUPATION		
INFORMAL EMPLOYMENT	113	35.2
FORMAL EMPLOYMENT	61	19.0
UNEMPLOYED	147	45.8

The results in Table 1 has revealed that, most of respondents are in the age range of 21-30 (38.0%), married (51.4%), and belong to the lower social class (54.2%). Additionally, a large proportion of respondents were Christians (83.8%) and were not employed (45.8%). This clearly shows that, there is need to address barriers to cervical cancer health services among economically disadvantaged populations.

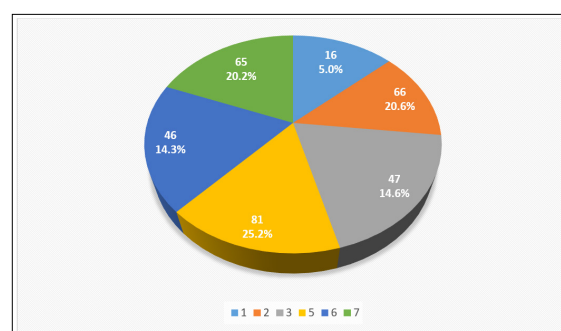


Figure 1: Number of Children

Figure 1 shows that 5.0% ($n = 16$) of the respondents have one child, while 20.6% ($n = 66$) have two children. Furthermore, 14.6% ($n = 47$) of the respondents reported having three children. The figure also shows that the highest proportion of respondents, 25.2% ($n = 81$), have five children, followed by 14.3% ($n = 46$) with six children and 20.2% ($n = 65$) with seven children.

Table 2: Level of Awareness Regarding Cervical Cancer Among Women of Child-Bearing Age

QUESTIONS	RESPONSES			
	YES		NO	
	FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
Have you heard about cervical cancer before participating in this survey?	165	51.4%	156	48.6%
Are you aware of the common risk factors associated with cervical cancer, such as certain infections and lifestyle factors?	104	32.4%	217	67.6%
Have you ever received information or education about the signs and symptoms of cervical cancer?	113	35.2%	208	64.8%
Are you familiar with the available screening methods for cervical cancer, such as Pap smears or HPV tests?	113	35.2%	208	64.8%
Do you know the recommended frequency for cervical cancer screenings for women of childbearing age?	86	26.8%	235	73.2%
Have you ever discussed cervical cancer or its prevention with a healthcare professional?	104	32.4%	217	67.6%
Are you aware of the potential consequences of untreated cervical cancer, such as its impact on reproductive health and overall well-being?	104	32.4%	217	67.6%
Do you know where to access cervical cancer health services in Lusaka District?	113	35.2%	208	64.8%
Have you ever participated in community awareness campaigns or educational programs focused on cervical cancer in Lusaka District?	113	35.2%	208	64.8%
Are you confident in your ability to recognize the importance of early detection and seek timely cervical cancer health services if needed?	86	26.8%	235	73.2%
TOTAL	321	100%	321	100%

Table 2 shows that, a small proportion of respondents (51.4%) have heard about cervical cancer. The results in Table 2 also show that, the majority of study participants (67.6%) are still unaware of the risk factors, cervical cancer screening methods (64.8%), and the importance of early detection of cervical cancer and seeking timely cervical cancer health services (73.2%) in the health facilities. The study further disclosed that the majority of the respondents (73.2%) were not aware of the indorsed frequency for cervical cancer screening in Lusaka district. The study also revealed that, a large proportion of the study participants (67.6%) were not aware of the possible consequences of untreated cervical cancer as well.

Table 3: Facilitators to Cervical Cancer Health Services Utilization

QUESTIONS	RESPONSES			
	YES		NO	
	FREQUENCY	PERCENTAGE	FFREQUENCY	PERCENTAGE
Have you ever received information about cervical cancer health services through community awareness campaigns in Lusaka District?	113	35.2%	208	64.8%
Are you aware of any government initiatives or programs promoting the importance of cervical cancer screenings in Lusaka District?	104	32.4%	217	67.6%
Have you personally experienced encouragement from healthcare professionals to utilize cervical cancer health services in Lusaka District?	208	64.8%	113	35.2%

Do you believe that the accessibility of cervical cancer health services, such as convenient clinic hours, positively influences their utilization in Lusaka District?	113	35.2%	208	64.8%
Have you ever utilized cervical cancer health services due to the recommendation or referral from a friend or family member in Lusaka District?	86	26.8%	235	73.2%
Is the availability of affordable or subsidized cervical cancer screenings a contributing factor to your utilization of health services in Lusaka District?	104	32.4%	217	67.6%
Do you perceive the cultural sensitivity and inclusivity of cervical cancer health services as facilitators to their increased utilization in Lusaka District?	104	32.4%	217	67.6%
Has the convenience of having multiple healthcare facilities offering cervical cancer services in Lusaka District positively influenced your utilization of these services?	208	64.8%	113	35.2%
Are you more likely to utilize cervical cancer health services if there is a community-based support system, such as peer groups, encouraging their use in Lusaka District?	150	46.7%	171	53.3%
Have you ever attended workshops or educational sessions on cervical cancer that contributed to your awareness and subsequent utilization of health services in Lusaka District?	50	15.5%	271	84.5%
TOTAL	321	100%	321	100%

Table 3 shows that, the majority of the respondents (64.8%) do not receive information about cervical cancer health services through community awareness campaigns. The study also disclosed that, a large proportion of study participants (64.8%) are usually encouraged by healthcare professionals and the convenient location of multiple healthcare facilities (64.8%) within the district to utilize cervical cancer services. The study also revealed that most of the respondents (84.5%) do not attend workshops or health educational awareness sessions on cervical cancer. The study also found that many study participants (67.6%) are still unaware of government initiatives regarding cervical cancer health services in the Lusaka district of Zambia. The research also revealed that a large number of respondents (73.2%) refused that they had never utilized cervical cancer health services as a result of a recommendation from a friend or family member.

Table 4: Barriers to Accessing and Utilizing Cervical Cancer Health Services.

QUESTIONS	RESPONSES			
	YES		NO	
	FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
Have you ever faced challenges related to transportation that hindered your access to cervical cancer health services in Lusaka District?	290	90.3%	31	9.7%
Do cultural beliefs or stigmas surrounding cervical cancer influence your decision to utilize health services in Lusaka District?	104	32.4%	217	67.6%
Have you encountered financial constraints that prevented you from seeking cervical cancer screenings or treatments in Lusaka District?	218	67.9%	103	32.1%
Are you aware of the availability of cervical cancer health services in Lusaka District?	113	35.2%	208	64.8%
Have you experienced fear or anxiety about the procedures involved in cervical cancer screenings, affecting your willingness to utilize these services?	86	26.8%	235	73.2%

Do you believe that the distance to healthcare facilities is a significant obstacle in accessing cervical cancer health services in Lusaka District?	217	67.6%	104	32.4%
Have you ever avoided seeking cervical cancer health services due to a lack of privacy or confidentiality concerns at healthcare facilities in Lusaka District?	290	90.3%	31	9.7%
Is the availability of information and education about cervical cancer a factor influencing your decision to access health services in Lusaka District?	208	64.8%	113	35.2%
Are you influenced by the opinions of family members or community members in your decision to utilize cervical cancer health services?	150	46.7%	171	53.3%
Have you ever refrained from seeking cervical cancer health services because of a perception that the services are not tailored to your cultural or religious preferences in Lusaka District?	66	20.5%	255	79.5%
Total	321	100%	321	100%

Table 4 indicates that, the most significant challenges faced by women of reproductive age when accessing and utilizing cervical cancer health services are transportation issues (90.3%), lack of privacy (90.3%), and financial constraints which impact 67.9% of study participants. Research also revealed that most of the respondents (67.6%) felt that the distance to healthcare facilities was also a major obstacle to cervical cancer health services accessibility and utilization. The study also revealed that many study participants (64.8%) are still unaware of available cervical cancer health services due to a lack of availability of health information and education about available free cervical cancer services among women of reproductive age. The study has further disclosed that, most of the respondents (73.2%) do not perceive fear or anxiety about cervical cancer screening procedures to affect their willingness to utilize these services. Table 4 has also disclosed that, most of the respondents (79.5%) have never desisted from utilizing cervical cancer health services as a result of influence from friends or family members in Lusaka District.

The association between respondents' level of awareness of cervical cancer and the socio-demographic variables is shown in Table 5. Age, marital status, social class, religion, level of education, occupation and number of children were found to have statistically significant association with respondents' level of awareness of cervical cancer ($P < 0.05$)

Table 5: Association Between Respondents' Level of Awareness of Cervical Cancer and Socio-Demographic Variables

SOCIO-DEMOGRAPHIC VARIABLES	χ^2 value	Df	p-value
AGE	7.306	216	0.000**
MARITAL STATUS	46.803	320	0.000**
SOCIAL CLASS	39.896	320	0.000**
RELIGION	56.416	320	0.000**
LEVEL OF EDUCATION	38.528	320	0.000**
OCCUPATION	39.896	320	0.000**
NUMBER OF CHILDREN	35.858	320	0.000**

**Significant at $P < 0.05$

Discussion

Demographic Data

The results from this study have revealed that, the majority of respondents were aged 21–30 years (38.0%), married (51.4%), and belonged to the lower socio-economic class (54.2%). In addition, a substantial proportion of the respondents identified as Christians (83.8%) and were unemployed (45.8%). The results further shows that 5.0% ($n = 16$) of respondents had one child, while 20.6% ($n = 66$) reported having two children. Moreover, 14.6% ($n = 47$) had three children, and the highest proportion of respondents, 25.2% ($n = 81$), reported having five children. This was followed by 14.3% ($n = 46$) and 20.2% ($n = 65$) of respondents who reported having six and seven children, respectively. The predominance of young, married women with high parity and low socio-economic status suggests an increased vulnerability to challenges in accessing cervical cancer prevention and screening services, particularly in the context of competing caregiving responsibilities and limited economic resources. These findings emphasizes the need to address barriers to cervical cancer health services among economically disadvantaged populations.

Level Of Awareness Regarding Cervical Cancer Among Women of Child-Bearing Age in Lusaka District of Zambia

The results from this study have revealed that, more than half of the respondents (51.4%) have heard about cervical cancer. The study also showed that, the majority of study participants (67.6%) are still unaware of the risk factors, available cervical cancer screening methods (64.8%), and the importance of early detection of cervical cancer and seeking timely cervical cancer health services (73.2%) in the health facilities in Lusaka district of Zambia. The study further disclosed that the majority of the respondents (73.2%) were not aware of the endorsed frequency for cervical cancer screening in Lusaka district. The study also revealed that, a significant proportion of the study participants (67.6%) were not aware of the possible consequences of untreated cervical cancer in the district. The findings from this study align with research conducted at a major university in the UK, which revealed that 71 students (38.2%) were aware of cervical

screening, yet only 20 (10.8%) had knowledge of cervical cancer. Additionally, it was found that a small percentage, approximately 26.9% (50 students), were already participating in the screening program, while 81 students (43.5%) expressed a willingness to engage in future screening initiatives. Furthermore, it was evident that students' perceptions were influenced by their experiences with the disease ($P = 0.000$), just as their participation in screening programs depended on their level of awareness ($P \leq 0.01$). Female African students from the Sub-Saharan African region displayed limited knowledge about the disease, which affected their attitudes toward screening. There is an urgent need for increased awareness and participation in screening programs within the university context, as this environment serves as a critical platform for fostering healthy behaviors [9].

Besides, the findings of this study also coincide with that of another cross-sectional study that was performed among young reproductive age women (16-25) in Kakamega urambi sub county in Kenya. The analysis revealed that the significant causes of delayed presentation of cervical cancer was greatly linked with ignorance on simple symptoms by women at the reproductive age, ignorance on the predisposing factors to cervical cancer and ignorance on the essence of regular gynecological checkup. The author suggested that there was necessity to sensitize this population through health education and health communication on the signs and symptoms of the disease and how it presents itself and also advise them to seek medical advice as soon as they notice any sign and symptoms to result in early diagnosis and treatment. The research also advised that screening facilities should be provided in all the wards to facilitate early detection and treatment of cervical cancer among the young women aged 16 -25 in Kenya [10].

Otherwise, the results are also comparable to the findings in another study in a southeastern state of Nigeria in a sample of women in reproductive age (23-36 years). The results indicated that the level of knowledge of cervical cancer among the participants was low and there is a misconception and cultural beliefs that affected the knowledge. The research also narrowed down to factors that contributed to the lack of knowledge and they were limited access to information and resources, fear, social disapproval, and poverty induced financial constraints. The results also showed that knowledge deficiency has negative influence on the mental, psychological, and social life of women that further impacts relationship with their friends and family. Besides this, the health education, community awareness campaigns, and the use of medical personnel and community engagements were also effective measures to increase knowledge and awareness of cervical cancer programs among women. The research also showed that the results suggest social work. The study, however, suggested that further research ought to be conducted on a larger and more diverse sample to confirm the said findings and look into approaches on how to increase knowledge and awareness about cervical cancer among Nigerian women [11].

Besides, the findings of this study cannot be compared to the findings of another study that found that, a majority of the participants (97%; $n = 624$) were aware of cervical cancer. Friends were the most typical information providers about cervical cancer (31.1; $n=194$). Over 59 percent of the respondents ($n=380$) had heard about a vaccine against cervical cancer but only 33

percent ($n=124$) had ever gotten a dose of the vaccine. Most of the respondents (89%; $n=550$) had heard that cervical cancer was preventable, but only half (52%; $n=290$) of the participants were aware that vaccination at the age of 9 to 13 could prevent cervical cancer in girls. Most of the participants were unaware of the cervical cancer risk factors; 15 percent ($n= 98$), 7 percent ($n= 45$) and 1.4 percent ($n= 9$) of the study members were not aware of the risk factors of cervical cancer at the onset of study, due to the early initiation of sexual intercourse, infection with the human papillomavirus (HPV) and smoking respectively. When adjusting the variables of age, class and religion, school health program students were twice ($aOR = 2.24$; 95%CI; 1.244.06) as likely to be aware that cervical cancer is preventable (Oringtho et al, 2024). Furthermore, the results of this research are also corresponding to the results of another study that revealed, that approximately 55 percent of the respondents were aware of services on cervical screening. More than half of them had negative attitudes towards cervical screening services and a very large proportion (63.4%) had never used any cervical screening service. A number of variables were found to determine the use of cervical screening services. At the level of 0.05, CI = 95, there was no significant correlation between levels of education, age, marital status and the use of cervical screening services, but the P -values were 0.681, 0.631 and 0.535 respectively [12].

Moreover, the results of the Tanzanian study are mostly similar to the findings reported on Lusaka District of Zambia since both the studies reveal that there are considerable gaps in knowledge and awareness of cervical cancer among the study populations. In Tanzania, most of the undergraduate students (75.7% not aware of cervical cancer and 82.5% negative attitudes towards the disease) had never been screened, only a quarter of them had ever been screened. Equally, the Lusaka District study indicates that only a little bit more than half of the participants (51.4) had ever heard about cervical cancer whereas most of them were not aware of the key issues like risk factors (67.6), screening procedures (64.8), the recommended frequency of screening (73.2) and the issue of early detection and prompt health-seeking behavior (73.2). This similar trend underscores constantly low cervical cancer literacy rates in various environments in sub-Saharan Africa. However, the Tanzanian study targeted university students, who may be expected to be more health literate, yet the results still showed the lack of proper knowledge and negative attitudes, which is why the better educational level is not the only guarantee of sufficient awareness on cervical cancer. Comparatively, the results of the Lusaka District indicate even more extensive informational lapses, specifically, in the context of the implications of untreated cervical cancer (67.6%) and attendance to the recommended screening timetables. Such parallels indicate institutional flaws in education on cervical cancer, awareness, and health communication tools in both settings. Moreover, the Tanzanian study determined that certain socio-demographic factors such as gender (female) and seniority level in medical school-going students were not associated with improved knowledge and attitudes towards cervical cancer, as opposed to female gender and seniority level. Though the results of the Lusaka District did not disaggregate predictors of knowledge, the general low awareness indicates that there is need to hold more focused, population-specific interventions. Combined, the results of the two studies help to highlight the immediate necessity to empower the ability to implement health

education at the community and institutional level, practice the promotion of screening services, and enhance the spread of information about risk factors, screening protocols, and the implications of delayed or untreated cervical cancer [13].

Facilitators to Cervical Cancer Health Services Utilization Among Child-Bearing Women in Lusaka District of Zambia

The results from this study found that, the majority of the respondents (64.8%) do not receive information about cervical cancer health services through community awareness campaigns programs such as health education, health communication, social mobilization and community engagement strategies. The study also disclosed that, a large proportion of study participants (64.8%) are usually encouraged by healthcare professionals and the convenient location of multiple healthcare facilities (64.8%) within the district to utilize cervical cancer health services. The study also revealed that most of the respondents (84.5%) do not attend workshops or health educational awareness sessions on cervical cancer which in turn further reduces the level of knowledge of this populous on cervical cancer and hinders them from accessing and utilizing the available cervical cancer health services in the district. The study also found that many study participants (67.6%) are still unaware of government initiatives regarding cervical cancer health services in the Lusaka district of Zambia. The research also revealed that a large number of respondents (73.2%) refused that they had never utilized cervical cancer health services as a result of a recommendation from a friend or family member.

The results of this research align with the results of a different study wherein it was established that women who were personally contacted about the program whether through a phone call or by their family doctors were more likely to attend screening programs on prevention of cervical cancer. It also discovered that effective free-of-charge awareness campaigns on the prevention of cervical cancer was also a powerful motivator since affordability was a major consideration among many of the women. Also, it was established that the role of family physicians was found to be of high importance as nearly all the respondents (94.8%) highlighted that their role had a positive impact on their involvement in accessing and using cervical cancer health services within the health facilities. This paper also confirmed that, personal motivation was also a factor since 45 percent of women said that they had chosen to participate in the program independently. Besides, more proactive women went through screening when they knew about the potential health benefits, especially the possibility to safeguard themselves against the effects of a dangerous disease. It was also discovered that a part of the participants also believed that the program was being implemented adequately, which increased trust and adoption [14].

Besides this, the results of the current study align with and deviate the systematic review conducted by and highlight context-specific factors in the use of cervical cancer (CC) health services in Lusaka District, Zambia. An interesting percentage of the respondents (64.8) showed that they get insignificant exposure to information on cervical cancer via community-based awareness programs such as health education, social mobilization, and community engagement programs. This is contrary to the findings of Shpendi et al. which found knowledge of cervical cancer as a critical facilitator of screening uptake,

and could mean that the lack of community-level information dissemination in the present environment can be one of the reasons to maintain knowledge gaps and inadequate service use. In line with the systematic review, recommendation by health practitioners was also a significant facilitator, and 64.8 percent of the respondents mentioned that they would be encouraged by health practitioners and the availability of health facilities to use the services. This congruency demonstrates the primary contribution of healthcare workers to the determination of screening behaviors in a variety of settings. Most respondents of the study, however, do not access cervical cancer services according to the recommendation of peers or relatives as most respondents (73.2) in the current research stated that they did not receive cervical cancer services. This difference is an indicator that interpersonal networks might have a minimal contribution in the promotion of screening in Lusaka, possibly as a result of stigma, ineffective community discussion, or the lack of spreading accurate information. Also, most of the respondents (84.5) said that they did not attend cervical cancer workshops or education, which probably adds to misinformation and restricts awareness. This result indirectly confirms the existence of barriers in the form of embarrassment and accessibility that were found in the review because a poor educational response could strengthen fear and discomfort in relation to screening. Moreover, a large percentage of respondents (67.6) did not know about government programs regarding services with cervical cancer which shows that policy implementation and population awareness are out of step- a situation that is especially topical in the case of low- and middle-income environments. Compared to the case of the review carried out by Shpendi et al. where financial constraints were considered the most widespread impediment, financial limitations did not feature visibly in the case of the current study. Instead, the barriers were stronger on informational and awareness related issues, which may be due to the influence of contextual differences in service delivery such as the presence of subsidized or even free cervical cancer screening services in the public health facilities in Zambia [15].

In addition, the findings of the research carried out in Lusaka are comparable to the research conducted in Malawi by, reporting the abysmal levels of uptake of cervical cancer screening (CCS), which accentuates the obstacles to its uptake. The level of screening among women was only reported as 13.1 in Malawi and was largely affected by age (women who were older), religion (Christians), semi-urban (lived in semi-urban) and ethnicity. Comparatively, the Lusaka study found informational and health-system barriers to be more significant: the majority of the participants reported reduced exposure to community awareness programs (64.8%), lower attendance to educational programs (84.5%), lack of awareness to government programs (67.6%), and low impact of peers and family (73.2%). Irrespective of such differences, both settings also highlighted the relevance of supportive systems; the Malawi study suggested the expansion of CCS services via ART and outreach clinics, whereas the Lusaka study suggested healthcare provider encouragement and easy access to facilities (64.8%) as key motivators. Thus, the comparative analysis of the studies indicates that although socio-demographic variables might be of a potent impact on screening behaviors in certain environments, the bridging of knowledge gaps, community-based actions, and health-system assistance is also important towards enhanced CCS uptake [16].

Barriers to Accessing and Utilizing Cervical Cancer Health Services

Table 4 indicates that, the most significant challenges faced by women of reproductive age when accessing and utilizing cervical cancer health services are transportation issues (90.3%), lack of privacy (90.3%), and financial constraints which impact 67.9% of study participants. Research also revealed that most of the respondents (67.6%) felt that the distance to healthcare facilities was also a major obstacle to cervical cancer health services accessibility and utilization. The study also revealed that many study participants (64.8%) are still unaware of available cervical cancer health services due to a lack of availability of health information and education about available free cervical cancer services among women of reproductive age. The study has further disclosed that, most of the respondents (73.2%) do not perceive fear or anxiety about cervical cancer screening procedures to affect their willingness to utilize these services. Table 4 has also disclosed that, most of the respondents (79.5%) have never desisted from utilizing cervical cancer health services as a results of influence from friends or family members in Lusaka District.

The results of this research are also comparable to the results of another research that found out that, health seeking behaviour prevalence of cervical cancer among study participants was only 14.2. It was also found out that, poor knowledge of respondents [AOR: 7.25, (95%CI: (1.87, 28.08)], never received information [AOR: 52.03, (95%CI: (13.77, 196.52))] and actively searching information about cervical cancer [AOR: 14.23, (95%CI: (3.49, 57.95))] were significantly associated factors that did not seek health in order. This paper emphasised the need to improve knowledge, stimulate active search of health information and experience of receiving information of various sources on health seeking behaviour [17].

Otherwise, the current study findings are similar to the other study that found that there are a number of factors that hinder cervical cancer service uptake among women of reproductive age (15-49) in Indonesia. Cover of screening was extremely low and only 5% of the women were screened against cervical cancer. Consequently, the vast majority of cases (76.6) were found in advanced stages, hence, rendering treatment ineffective and leading to high mortality rates. One of the reasons of these poor results was the ignorance and low knowledge on cervical cancer and the necessity of early diagnosis. Lack of adequate education about the disease declined women to attend screening programs and made them diagnose the disease in time [18].

More so, the findings of this research are also consistent with the findings of another research which determined that, lack of priority and embarrassment were recognized as the impediments to cervical cancer screening services. Among the participants who had never been screened previously, the fear of getting a cancer diagnosis and lack of information on screening services were the significant obstacles. Pregnancy, atypical gynecological symptoms, friends and family encouragement were some of the signals to initiate screening to the participants. The majority of the respondents in the two groups were aware of the advantages of screening against cervical cancer. Having passed a screening boosted the self-efficacy of the participants to go again to screening. Misunderstanding on screening tests and cervical

cancer was also cited as a constraint to the access of screening services among the participants [19].

Other than that, the findings of this study are consistent with those of another study that revealed various obstacles to the use of cervical cancer prevention services. One of the greatest obstacles was lack of awareness regarding cervical cancer that is closely correlated with the high prevalence of the illness. A large number of women lacked access to correct information and this means that they were not aware of the significance of early detection using Pap smears. Also, women lacked awareness and motivation to get screening thus delaying the detection till late stages when the disease has developed. Such obstacles also led to high mortality rates because the majority of cases were only known when the treatment options were not so effective and had limited opportunities [20].

Moreover, the findings of the ongoing study are consistent with the findings of another line of research that identified the barriers to Cervical Cancer Screening, Diagnosis, Follow-Up Care and Treatment were the prevalence of fear and stigma towards cervical cancer and lack of information and access to screening and treatment. The research also described that members in both categories of groups affirmed that patient navigation program would be a practical approach to assist women navigate through the cancer continuum of care including screening, diagnosis, follow-up care and treatment.

Recommendations

The author suggests that, Lusaka District Health Office should prioritize sustained dissemination of health information on cervical cancer, focusing on risk factors, available screening and vaccination services, locations where services can be accessed, and the importance of early detection and management. Increased awareness is essential for improving screening and vaccine uptake and timely health-seeking behavior among women of childbearing age. The principal investigator further recommends that the Ministry of Health in Zambia, in collaboration with the World Health Organization (WHO), should strengthen the use of mobile clinics to improve access to cervical cancer screening and related services, particularly for women facing barriers such as transportation challenges, financial constraints, and privacy concerns. The researcher also recommends that the Lusaka District Health Office should conduct continuous training of healthcare providers, with emphasis on patient confidentiality, culturally sensitive health communication, and quality service delivery, to ensure trust and acceptability of cervical cancer services.

The author also suggests that the Lusaka District Health Office, in collaboration with the Ministry of Health and community stakeholders should strengthen community engagement and social mobilization strategies in order to improve the utilization of cervical cancer health services. This should include the active involvement of community leaders, women's groups, churches, market associations, schools, the media, and community health volunteers to disseminate accurate and culturally appropriate information on cervical cancer risk factors, screening methods, availability of free services, and the importance of early detection [21].

Conclusion

In conclusion, this study revealed that, although there is a moderate level of awareness about cervical cancer (51.4%), there remains a significant knowledge gap, particularly regarding risk factors, screening methods, and the importance of early detection among respondents. Additionally, the study highlighted critical barriers that limit access to and utilization of cervical cancer health services among women of reproductive age. These barriers include transportation challenges, lack of privacy and confidentiality, financial constraints, and the distance from home to healthcare facilities, disproportionately affecting women from lower socioeconomic backgrounds in Lusaka District, Zambia. While some women are encouraged to utilize cervical cancer health services due to the presence of healthcare professionals and multiple health facilities, the majority of respondents do not participate in educational awareness sessions and are largely unaware of government initiatives and community campaigns. The study therefore recommends that the Lusaka District Health Office should continue implementing comprehensive health education campaigns, social mobilization, and community engagement strategies to increase awareness and utilization of cervical cancer services among women of childbearing age, with emphasis on risk factors, screening methods, available services, early detection, effective management of cervical cancer cases, and the promotion of HPV vaccination. Furthermore, the author further suggests that, Lusaka District Health Office should continue to build the capacity of healthcare providers in areas such as patient confidentiality, culturally sensitive health communication, and the effective use of mobile clinics to mitigate barriers related to transportation, privacy, and financial constraints.

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Conflicts of Interest

The authors declare that there are no conflicts of interest, whether financial, personal, professional, or institutional, that could have influenced the design, conduct, analysis, interpretation, or reporting of the findings of this study.

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