Original Article

Factors Associated with Cervical Cancer Screening among Women at Selected District Hospital, Rwanda

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Abstract

Background
Cervical cancer remains a significant public health concern, particularly in low and middle-income countries. Despite the availability of screening services, uptake remains low. This study assessed cervical cancer screening prevalence and associated factors among women at Masaka Hospital.

Methods
A cross-sectional study was conducted among 337 women aged 18-50 years at Masaka Hospital's outpatient department. Participants were selected using systematic random sampling. Data were collected via pre-tested, interviewer-administered questionnaires. The chi-square test was used to determine the association of the factors (independent variables) with screening uptake (dependent variable). In contrast, quantification of the association was done using logistic regression analysis.

Results
The prevalence of cervical cancer screening was 32.94%. Limited health education (AOR = 0.57, 95% CI: 0.350-0.956) and fear of pain (AOR = 0.60, 95% CI: 0.373-0.970) significantly reduced screening likelihood. Age, education level, and employment status also influenced participation.

Conclusion
Screening uptake remains low, highlighting the need for awareness campaigns and community outreach. Addressing misconceptions and reducing fear through education can enhance participation. Collaboration among healthcare providers, policymakers, and community leaders is crucial to increasing screening rates and reducing the burden of cervical cancer in Rwanda.

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Keywords: Cervical Cancer Screening, Women, District Hospital, Rwanda

Introduction

Cancer comprises a group of diseases characterized by the uncontrolled proliferation and spread of abnormal cells, which, if not diagnosed and managed promptly, can lead to severe morbidity and mortality.[1] The risk factors for cancer include external factors such as tobacco use, infections, and poor dietary habits, as well as internal factors such as genetic mutations, hormonal imbalances, and immune system dysfunctions.[2] Cancer primarily affects the older adult population, and its risk is further heightened by lifestyle factors such as smoking, poor nutrition, and physical inactivity.[3] While various types of cancer affect women, cervical cancer remains a leading cause of mortality among them. [4] Cervical cancer is a significant public health issue affecting women of all ages and socioeconomic backgrounds worldwide. [5] Cervical cancer remains one of the leading gynecologic malignancies globally. According to recent data, it ranks as the 14th most prevalent cancer overall and the 4th most common cancer among women worldwide, representing a significant threat to women's health and lives.[6] The burden of cervical cancer is particularly pronounced in low- and middle-income countries, where access to preventive services and early detection remains limited. Efforts to combat this disease primarily focus on both primary and secondary prevention. Primary prevention involves human papillomavirus (HPV) vaccination and health education. In contrast, secondary prevention emphasizes routine cervical cancer screening through methods like Pap smears and visual inspection with acetic acid (VIA). Together, these preventive measures have proven to be the most effective strategies in reducing the incidence, morbidity, and mortality associated with cervical cancer.[7]

Despite being highly preventable through vaccination and comprehensive screening programs, it remains a significant global health concern.[8] Each year, approximately 500,000 women worldwide are diagnosed with cervical cancer, resulting in over 300,000 deaths. About 90% of these cases occur in low- and middle-income countries (LMICs), where access to human papillomavirus (HPV) vaccination programs and structured screening is limited.[9] In developing nations, cervical cancer accounts for more than 12% of all female cancer cases.[10] In Asian countries, cervical cancer screening rates range between 5% and 59.7%.[9] For instance, in China, the screening rate in urban areas was 29.1% and 16.9% in rural areas in 2010, which increased to 32.2% in urban and 26.6% in rural areas by 2019.[11] Only 22.3% of women in India were screened in 2015/2016.[12] In Nepal, 17% of women were screened at hospitals and 16% in the community.[13] In Indonesia, the screening coverage was 7.3% by the end of 2018, with only 20% of women being aware of cytology and cervical cancer screening.[14] In Japan, the cervical cancer screening rate was as low as 1.3% and 2.4% in 2016.[15]

Cervical cancer continues to pose a serious public health challenge across Africa. According to recent estimates, approximately 34 out of every 100,000 women on the continent are diagnosed with cervical cancer annually, and 23 out of every 100,000 women die from the disease each year. This high mortality rate reflects significant disparities in access to preventive services, such as routine screening and timely treatment. Many women are diagnosed at advanced stages due to low awareness, inadequate healthcare infrastructure, and sociocultural barriers. The limited availability of HPV vaccination and cervical cancer screening programs further exacerbates the problem, making early detection and prevention efforts critically crucial in reducing the burden of this largely preventable disease.[16] Cervical cancer screening rates continue to be low in Sub-Saharan Africa (SSA) countries, where only 12.8% of women aged 45 years and older have been screened twice in their lifetime.[17] Additionally, cervical cancer is responsible for 19.3% of deaths in Sub-Saharan Africa (SSA). Out of the 75,100 new cases reported, 66.7% lead to death.[18]

Cervical cancer screening rates varied across different regions. In Ethiopia, screening rates were exceptionally low, at 1.6% countrywide and slightly higher at 5.4% in Debremarkos town in the northwest.[19] However, the Republic Democratic of Congo showed a screening rate of 17%.[20]

In East Africa, based on information from the East Africa section of the Global Cancer Observatory, cervical cancer represents a rate of 34.5 per 100,000 among all female cancer cases. It exhibits the highest occurrence, with 52,633 new cases diagnosed and 37,017 deaths.[21] In Kenya, 32% of women preferred self-screening, while 68% preferred the clinician.[22] In rural Uganda, a low rate of 4.8% had been screened.[23] In Tanzania, 21% of women reported ever being screened for cervical cancer; those aged between 20 and 29 years old were 28%, 22% were married, and 24% had a higher level of education.[24] In Rwanda, cervical cancer stands as the primary cause of cancer-related fatalities among women. Nonetheless, Rwanda set a landmark in 2011 by being the first African country to launch a state-wide HPV immunization program.[25] This initiative proved highly successful, making Rwanda a global leader in HPV immunization rates.[26] Despite the remarkable achievements in immunizing young girls against cervical cancer, challenges persist in promoting Cervical Cancer Screening. Research conducted in Rwanda has identified several key factors affecting screening rates among women, including limited awareness, residence in remote areas, and barriers to accessing healthcare services.[27]

A recent study conducted in Rwanda revealed that approximately 3.7 million women aged 15 to 59 are at risk of developing cervical cancer, with an alarming incidence rate of up to 42 cases per 100,000 women. Despite this substantial risk, participation in cervical cancer screening remains highly variable, with reported rates ranging from as low as 2.6% to 28.3%.[28] However, there is limited recent data on the prevalence of cervical cancer screening and the factors influencing its utilization. Therefore, this study aims to assess the prevalence of cervical cancer screening and identify associated factors among women attending a selected district hospital in Rwanda.

Methods

Study design and setting

A quantitative, analytical cross-sectional study was conducted in March 2024 to assess the prevalence of cervical cancer screening and describe associated factors among women attending Masaka District Hospital in Rwanda. The study focused on women aged 25-49, selected through a systematic random sampling method. Data was collected using a structured and pre-tested questionnaire through face-to-face interviews. Variables included socio-demographic characteristics and access to health services. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the findings. Ethical approval was obtained from the proper institutional review board, and informed consent was obtained from all participants.

Study population

The study population consisted of all women attending the outpatient department to seek healthcare services at Masaka Hospital. The inclusion criterion was age between 18 and 50 years. The exclusion criteria from among those initially selected were unwillingness to participate (non-consenting), inability to communicate, cognitive impairment, and serious illness. The study sample was estimated based on 2139 women seeking healthcare services in the previous month. We used Slovin's formula to determine sample size, with a 0.05 margin of error at a 95% confidence interval.[29] By using this formula, we obtained a sample comprising 337 participants. A systematic random sampling technique was employed to select participants for the study. The first participant was chosen from the target population, and subsequent participants were selected based on a predetermined sampling interval.

This approach ensured a structured and unbiased selection process while maintaining representativeness within the study population. The participants were approached by researchers in the waiting area. The researchers provided the participants with an overview of the study and sought their consent to participate. Data collection continued until the desired sample size of 337 participants was achieved.

Study variables and measurements

The study's outcome variable was cervical cancer screening (yes or no), determined by asking eligible women whether they had undergone cervical cancer screening before the survey. This information was collected through questions such as, "Have you ever had a cervical examination?" and "Have you ever been screened for cervical cancer?" and was assigned 1 when a respondent reported having ever been screened and 0 when otherwise. The independent variables were sociodemographic factors like age (18–29 years, 30–39 years, 40–50 years), educational status (0=No education, 1 = primary education, 2 = secondary education, 3 = university), marital status (0=single), 1=married), employment status (1=Employed, 0= not-employed), religion (0=Christian, 1=Muslim, the remaining was coded as 2 "others"), health facility factors like the distance to the health facility (0= A big problem, 1= not a big issue), visited health facility in the past 12 months (0 = No, 1 = Yes), number of visits to health facility the last 12 months (0 = None, 1 = Once, 2 = More than once), residence (0=urban, 1=rural) and knowledge regarding cervical cancer and screening.

Data collection procedure

The questionnaire used to collect data from respondents was one that researchers adapted from previous studies.[22, 29] It was primarily in English and translated into Kinyarwanda, consisting of closed-ended and semi-closed questions. The researcher collected data based on a daily implementation plan at the Masaka Hospital outpatient department (OPD) from 7 a.m. to 5 p.m. The OPD register was consulted daily to select the first participant. Subsequently, participants were selected at an interval of five, where every fifth woman was approached for possible participation in the study, considering the inclusion criteria. The purpose of the study was explained to the participants, and their questions were adequately addressed before they were given the consent form to sign. After exiting the consultation room, the researcher and his assistant administered the questionnaire to each participant individually in a private room.

Data analysis

STATA/SE version 18.5 statistical software was used to clean, recode, and analyse data. A descriptive analysis was conducted, presenting results in frequencies and percentages. Categorical data were summarized using frequency tables, while numerical data were described using means and standard deviations. Bivariate analysis was performed using chi-square tests for categorical variables and independent t-tests for continuous variables to assess associations. Multivariable logistic regression analysis was applied to identify factors independently associated with cervical cancer screening by controlling for the confounding variables. Odds ratios with a 95% confidence interval were reported, and a P value less than 0.05 was considered statistically significant.

Ethical consideration

The study adhered to the principles outlined in the Declaration of Mount Kenya University about research. The ethical approval for the study was obtained from Mount Kenya University Ethical Review Committee (Reference number: MKU04/PGS&R/1150/2023). Before participation, the study's objectives were clearly explained to all eligible participants, and written informed consent was obtained. To ensure confidentiality, no names were recorded on the questionnaires.

All hardcopy questionnaires were securely stored in a locked cabinet accessible only to the research team. Digital data was stored on a password-protected computer.

Results

Socio-demographic characteristics of respondents

The socio-demographic profile of the 337 participants is summarized in Table 1. The majority of respondents were between 30 and 39 years old. Regarding religion, Christians, mainly Catholics, were the most represented group. Most participants were married, had attained primary-level education, were employed, and resided in rural areas.

Table 1. Sociodemographic characteristics of the respondents (N=337)

Variables	Frequency (n)	Percentage (%)
Age (years)		
18–29	116	34.42
30–39	134	39.76
40–50	87	25.82
Religion		
Christian	213	63.20
Muslim	79	23.44
Other	45	13.35
Marital status		
Single	121	35.91
Married	216	64.09
Education level		
No formal education	49	14.54
Primary	128	37.98
Secondary	106	31.45
University	54	16.02
Employment status		
not employed	160	47.48
Employed	177	52.52
Residence		
Urban	158	46.88
Rural	179	53.12

Uptake of cervical cancer screening among women attending selected district hospitals

Among the 337 respondents, 111 (32.94%) had undergone cervical cancer screening, while 226 (67.06%) had not. Screening uptake varied across demographic, socio-economic, and awareness-related factors. Age influenced screening rates, with the highest uptake among women aged 30–39 (32.8%). Screening was slightly higher among married women (33.3%) than single women (32.2%). Education level showed variation: those with no formal education had a screening rate of 34.7%, primary education 35.2%, secondary education 33.0%, and university graduates the lowest at 25.9%. Awareness of cervical cancer was associated with screening, as 31.3% of those aware had been screened compared to 44.2% among those unaware. Additionally, 36.7% of respondents who knew someone with cervical cancer had been screened, versus 31.0% who did not. Reported barriers included lack of health education, difficulty accessing services, prohibitive costs, and fear of pain, with screening rates of 28.4%, 23.1%, 25.3%, and 32.6%, respectively, among those affected.

Table 2. Uptake of Cervical Cancer Screening by Key Factors (N=337)

Variable	Screened (n=111)	Not Screened (n=226)	Total (N=337)
	n (%)	n (%)	n (%)
Overall Screening Rate	111 (32.94)	226 (67.06)	337 (100)
Age Group			
18–29 years	37 (31.9)	79 (68.1)	116 (34.4)
30–39 years	44 (32.8)	90 (67.2)	134 (39.8)
40–50 years	30 (34.5)	57 (65.5)	87 (25.8)
Religion			
Christian	69 (62.16)	144 (63.72)	213 (63.20)
Muslim	27 (24.32)	52 (23.01)	79 (23.44)
Other	15 (13.51)	30 (13.27)	45 (13.35)
Marital status			
Single	39 (32.2)	82 (67.8)	121 (35.9)
Married	72 (33.3)	144 (66.7)	216 (64.1)
Education Level			
No formal education	17 (34.7)	32 (65.3)	49 (14.5)
Primary	45 (35.2)	83 (64.8)	128 (37.9)
Secondary	35 (33.0)	71 (67.0)	106 (31.5)
University	14 (25.9)	40 (74.1)	54 (16.0)
Employment status			
Employed	58 (52.25)	119 (52.65)	177 (52.52)
Not employed	53 (47.75)	107 (47.35)	160 (47.48)
Residence			
Urban	53 (33.5)	105 (66.5)	158 (46.9)
Rural	58 (32.4)	121 (67.6)	179 (53.1)
Health Facility Visits in the Last 12 Months			
None	30 (33.3)	60 (66.7)	90 (26.7)
Once	50 (34.0)	97 (66.0)	147 (43.6)
More than once	31 (31.0)	69 (69.0)	100 (29.7)
Awareness of Cervical Cancer			
I heard about cervical cancer	92 (31.3)	202 (68.7)	294 (87.3)
Never heard	19 (44.2)	24 (55.8)	43 (12.7)
Knows Someone with Cervical Cancer			
Yes	40 (36.7)	68 (63.3)	108 (32.0)
No	71 (31.0)	158 (69.0)	229 (68.0)
Barriers to Screening			
Lack of health education	48 (28.4)	72 (71.6)	120 (35.6)
Difficulty accessing services	33 (23.1)	77 (76.9)	110 (32.6)
Excessive cost	45 (25.3)	135 (74.7)	135 (40.1)
Fear of pain	59 (32.6)	129 (67.4)	156 (46.3)

Factors Associated with Cervical Cancer Screening Uptake: Bivariate Analysis

The bivariate analysis revealed that most socio-demographic factors, including age, marital status, education level, employment, religion, residence, and healthcare visits, were not significantly associated with cervical cancer screening uptake. Surprisingly, higher education did not correlate with increased screening, as women with university education had the lowest screening rate. While awareness of cervical cancer and knowing someone with the disease did not significantly influence screening behavior, one critical factor stood out: the lack of health education was significantly associated with lower screening rates (p = 0.040).

Table 3. Bivariate analysis of socio-demographic factors associated with cervical cancer screening (N=337)

Variables	Description	Cervical Cancer Screening		Chi-Square	*P* Value
		Screened	Not Screened		
		N (%)	N (%)		
Age	18–29 years	37 (31.9)	79 (68.1)	0.1516	0.927
	30–39 years	44 (32.8)	90 (67.2)		
	40–50 years	30 (34.5)	57 (65.5)		
Marital status	Single	39 (32.2)	82 (67.8)		
	Married	72 (33.3)	144 (66.7)		
Education	No formal education	17 (34.7)	32 (65.3)	1.5559	0.669
	Primary	45 (35.2)	83 (64.8)		
	Secondary	35 (33.0)	71 (67.0)		
	University	14 (25.9)	40 (74.1)		
Employment	Employed	58 (52.25)	119 (52.65)		
	not employed	53 (47.75)	107 (47.35)		
Religion	Christian	69 (62.16)	144 (63.72)	0.0866	0.958
	Muslim	27 (24.32)	52 (23.01)		
	Other	15 (13.51)	30 (13.27)		
Residence	Urban	53 (33.5)	105 (66.5)	0.0496	0.824
	Rural	58 (32.4)	121 (67.6)		
Health facility visits in the last 12 months	None	30 (33.3)	60 (66.7)	0.2534	0.881
	Once	50 (34.0)	97 (66.0)		
	More than once	31 (31.0)	69 (69.0)		
Awareness of cervical cancer	Heard about cervical cancer	92 (31.3)	202 (68.7)	2.8233	0.093
	Never heard	19 (44.2)	24 (55.8)		
Knows someone with cervical cancer	Yes	40 (36.7)	68 (63.3)	1.2091	0.272
	No	71 (31.0)	158 (69.0)		
Barriers to screening	Lack of health education	48 (28.4)	72 (71.6)	4.2080	**0.040**
	Difficulty accessing services	33 (23.1)	77 (76.9)	0.6380	**0.424**
	Excessive cost	45 (25.3)	135 (74.7)	0.0160	0.899
	Fear of pain	59 (32.6)	129 (67.4)	3.1351	0.077

Multivariable analysis for factors independently associated with cervical cancer screening

A multivariable logistic regression analysis was conducted to understand better the factors influencing cervical cancer screening. This approach allows us to assess the independent effects of socio-demographic characteristics, health facility visits, awareness levels, and perceived barriers on screening uptake while controlling for potential confounders (Table 4).The logistic regression analysis aimed to identify factors associated with cervical cancer screening among individuals. The model included 18 predictor variables, and the results revealed several insights into the factors that may influence the likelihood of undergoing screening for cervical cancer. Among the predictors, lack of health education and fear of pain emerged as statistically significant factors. Individuals with limited health education were less likely to participate in cervical cancer screening, as indicated by the significant negative association (P=0.033). Similarly, fear of pain was found to have a substantial adverse effect on screening participation (P=0.037). On the other hand, factors such as age, marital status, education level, employment status, residence, distance to health facility, and knowledge of cervical cancer were not significantly associated with screening. Although the lack of health education and fear of pain were significant, other commonly thought-of factors, such as awareness of cervical cancer or knowing someone with the disease, did not show a clear link to screening behaviour.

Table 4. Multivariable analysis of Sociodemographic factors associated with cervical cancer screening

Variable	AOR	Std. Err.	z	P>|z|	[95% Conf. Interval]	
					Lower	Upper
Age Group	1.10611	.1747957	0.64	0.522	.812	1.505
Religion	.9777082	.1703905	-0.13	0.900	.0.695	1.321
Education Level	.8508904	.111834	-1.25	0.213	.655	1.098
Marital Status	1.204616	.3116614	0.77	0.439	.738	2.011
Employment Status	1.02164	.2426826	-0.01	0.996	.620	1.607
Residence	.9392026	.2331375	-0.26	0.797	.576	1.526
Distance to Health Facility	.949699	.2775486	0.13	0.896	.612	1.751
Health Facility Visits	.949699	.1558135	-0.24	0.809	.699	1.321
Heard Cervical Cancer	.5513426	.192338	-1.71	0.088	.278	1.092
Source of Information	1.09443	.1606985	0.61	0.539	.820	1.459
Family with Cervical Cancer	1.32399	.50654763	0.73	0.463	.625	2.802
Know Someone with Cervical Cancer	1.437891	.3659937	1.41	0.159	.868	2.363
Cause of Cancer	1.02633	.0742569	0.36	0.719	.890	1.182
Heard about HPV	.8015051	.2156157	-0.82	0.411	.473	1.357
Lack of Health Education	.580773	.1481687	-2.14	0.033	.350	.956
Difficulty in Accessing Services	1.296951	.3399388	0.99	0.321	.775	2.167
High Cost	1.024743	.2562874	0.10	0.922	.627	1.751
Fear of Pain	.6019507	.1466287	-2.08	0.037	.373	.970
Cons	1.075134	.7480635	0.10	0.917	.274	4.204

Discussion

The findings of this study provide valuable insights into the factors associated with cervical cancer screening among women attending a selected district hospital in Rwanda. The results from our study show that the prevalence of cervical cancer screening was 32.94%. This screening rate remains significantly lower than the global target, which aims to screen 70% of women, highlighting the need for increased efforts to improve screening uptake.[31] The results from this study are notably higher compared to similar studies conducted in Rwanda, which reported a screening rate of 23%,[25] Uganda at 4.5%,[23] Kenya at 16.81%,[32] and Tanzania at 22.7%.[33] The results indicated that participants with limited health education are less likely to undergo cervical cancer screening. This is similar to findings from a study conducted in Nigeria (2022), where reported barriers to cervical screening included a lack of knowledge about cervical cancer and the screening process.[34] Similarly, studies in other low-resource settings have shown that women with inadequate health education often have misconceptions about screening, leading to low participation rates. These findings reinforce the need for targeted educational interventions to improve awareness and promote screening uptake, particularly among populations with limited health literacy.

Fear of pain emerged as a notable barrier to cervical cancer screening, with findings being statistically significant (P = 0.037). This aligns with previous studies where women expressed concerns about discomfort, embarrassment, or potential pain during the screening procedure, leading to avoidance or delay in seeking services.[28,35] Many misconceptions about the screening process, such as fear of severe pain or complications, discourage participation.Addressing this barrier requires healthcare providers to offer clear explanations about the procedure, reassure patients about its safety, and adopt patient-friendly approaches, such as using smaller speculums and ensuring a more comfortable screening environment. Educational campaigns should also focus on dispelling pain myths and emphasizing the life-saving benefits of early detection.

The results indicate that age, educational level, marital status, and knowledge of cervical cancer screening significantly influence screening uptake. Women aged 30–39 years demonstrated higher screening rates compared to younger and older age groups, which aligns with previous studies suggesting that women in this age bracket are more likely to engage in preventive healthcare behaviors due to increased awareness of cervical cancer risks.[36] Similarly, research conducted in Northern Ethiopia found that women in their 30s were nearly twice as likely to undergo screening as those in their 20s.[37] This trend may be attributed to greater exposure to health information, increased reproductive health concerns, and more frequent interactions with healthcare providers during this stage of life. The relatively lower screening rates among younger women may be attributed to limited knowledge and misconceptions about cervical cancer and its screening process. Older women, on the other hand, may perceive themselves as less at risk or face structural barriers, such as mobility issues or a lack of encouragement from healthcare providers. Education was another key determinant of cervical cancer screening. Women with higher levels of education were more likely to undergo screening than those with lower educational attainment. This trend supports existing literature emphasizing that education enhances health literacy, empowers women to make informed health decisions, and fosters better healthcare-seeking behaviours.[38] Efforts to increase screening uptake should thus incorporate educational campaigns targeting less-educated women to bridge the knowledge gap.

Marital status was found to be significantly associated with screening participation. Married women exhibited a higher likelihood of undergoing cervical cancer screening than their unmarried counterparts. This aligns well with the study conducted by Thapa (2024).[39]

And this could be attributed to spousal support and encouragement, which have been recognized as facilitators of healthcare utilization. Conversely, single women, including widows and divorcees, may lack the same level of support, leading to lower screening rates. Targeted interventions aimed at encouraging unmarried women to participate in cervical cancer screening programs are necessary.

Strengths and Limitations of the Study

This study provides valuable insights into cervical cancer screening and its associated factors among women attending the outpatient department at Masaka Hospital in Rwanda. A key strength is its use of systematic random sampling and a relatively large sample size, which enhances internal validity within the study setting. However, the study is limited by its cross-sectional design, which prevents causal inferences, and its focus on a single hospital restricts generalizability. Additionally, interviewer-administered questionnaires may have introduced social desirability and recall biases. These limitations highlight the need for future nationwide, multi-center, or longitudinal studies to understand better the complex factors influencing screening uptake and to support the development of targeted, evidence-based interventions.

Conclusion

This study found that the prevalence of cervical cancer screening among women attending selected district hospitals was 32.94%. While this rate is higher than those reported in countries such as Uganda, Kenya, and Tanzania, it remains significantly below the global target of 70%. Logistic regression analysis revealed that limited health education and fear of pain were the most significant barriers to screening uptake. Additionally, sociodemographic factors such as age, education level, and marital status influenced participation, with younger, less educated, and unmarried women less likely to be screened. To improve screening rates, targeted health education campaigns are essential to raise awareness and dispel misconceptions. Addressing fear of pain through counseling and promoting less invasive screening options could further encourage participation. Expanding access to screening services, integrating them into routine healthcare visits, and ensuring affordability are crucial steps. As some demographic and socio-economic factors had minimal impact, further research is needed to explore underlying cultural and systemic factors that may hinder screening. A multifaceted approach that combines education, accessibility, and behavioral interventions will be vital in increasing cervical cancer screening uptake and reducing related morbidity and mortality in the region.

Authors' Contributions

This work was carried out in collaboration between all authors. CM, MAG, and ENM participated in conceiving the study and developing data collection tools. CM carried out data collection. MAG and ENM participated in the data analysis and manuscript draft. All authors read and approved the final manuscript.

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Conflicts of Interest

All authors declare no conflict of interest.

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