

<https://doi.org/10.59298/NIJRMS/2024/118.12757.1400>

Factors Influencing Utilization of Cervical Cancer Screening Services among Women 20 Years or More Attending KIU-Teaching Hospital in Ishaka Bushenyi

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ABSTRACT

Worldwide, cervical cancer strikes almost half a million women every year and is fatal in approximately half of these cases, particularly those in developing countries where screening programs are not well established with over 493,000 new cases of cervical cancer occurring each year among women, and 274,000 women dying of the disease annually. This study was designed to determine factors influencing the utilization of cervical screening services among women over 20 years attending KIUTH, Ishaka Bushenyi, Western Uganda. A descriptive cross-sectional study among 70 women 20 years or more attending KIUTH in Bushenyi district was sampled randomly and using a self-administered questionnaire, data was collected, coded, entered, and analyzed using IBM SPSS version 20; presented in frequency and percentage charts and tables and P-Values where necessary. According to the study findings, 70% had ever screened for cervical cancer. Using Pap smear (51.4%), VIA (37.1%) and Histology (11.4%). The majority 56(80.0%) had ever heard about cervical cancer. Mostly 39(55.7%) acquired their information from Health workers and to a considerable extent 20(28.6%) from media 55(78.6%) for expensiveness as the main hindrance. 52.4% not screened were not aware of the availability of the services. Nonetheless, 42(85.7%) among the screened agreed that the services were available but this was not statistically significant. A significant effect was noted with health workers' sensitization about STIs 44(89.8%); 33(67.3%) further agreed that services cover cancer (cervical) prevention offering professional advice 42(85.7%). Once counseled, 33(82.5%) agreed that cervical cancer could be prevented. The utilization level stands at a good position with up to 70% screening mostly using pap smear. On an individual level; Health workers and media increases awareness and thus utilization. Statistically, health facilities/workers could further empower the utilization of cervical cancer screening through sensitization, counseling, and guidance concerning utilization. However, affordability, safety, and accessibility of such services and misinformation remain a hindrance to the utilization of cervical cancer screening services.

Keywords: Cervical cancer, Women, Cervical screening, Pap smear.

INTRODUCTION

Worldwide, cervical cancer strikes almost half a million women every year and is fatal in approximately half of these cases, particularly in developing countries where screening programs are not well established [1]. In Sub-Saharan Africa, cervical cancer is the second most prevalent type of cancer among women [2]. Reports show that the cervical cancer survival rate in the sub-Saharan African region was 21% in 2002 in comparison to that of 70% and 66% in the United States and Western European countries respectively [3]. Cervical cancer is the most common malignancy of women in Uganda and the majority of the women who report to the hospital are at the advanced stage of the disease where death is imminent [4, 5]. It is estimated that every year approximately 40 women in every 100,

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000 develop cervical cancer in Uganda compared to the global incidence of 15 per every 100,000 women. Statistics confirm that about half of the women with cervical cancer die within three years of diagnosis [6]. Projections show that by 2025, about 6,400 new cervical cancer cases and 4,300 deaths will occur annually [7]. Cancer of the cervix results from persistent infection with specific strains of human papillomavirus (HPV), a large family of viruses, of which other strains cause benign warts [8, 9]. Lesions have been associated with the development of cervical cancer but women with; HPV infection, smokers, weakened immune systems (for example HIV infection), Chlamydia infection, a diet low in fruits and vegetables, overweight, having multiple term pregnancies, being younger than 17 years at first full-term pregnancy, long use of oral contraceptives, IUDs use, family history of cervical cancer and being of a low economic status are more at risk of developing the disease [10-12]. Young women are at higher risk just because they tend to be sexually active and have higher numbers of sexual partners [13]. Research also has it that young women are poorly informed about cervical cancer and the associated risk factors, are unclear about the purpose of cervical cancer (CaCx) screening, and hold negative or inaccurate beliefs or attitudes about Pap testing [13]. On a general note, poor knowledge, lack of awareness, and late diagnosis of various types of cancers preclude treatment outcomes [14-16]. Poor knowledge about cervical cancer, and lack of awareness of available screening methods have been identified as the most important factors hindering the use of available cervical cancer screening services [17]. Levels of utilization of the screening services differ worldwide and this has resulted in an increased overall prevalence of cervical cancer cases globally. Cervical cancer ranks as the 1st most frequent cancer and the 2nd among women between 15-44 years with rapidly increasing rates with ~ 4,379 new incidences and 2,511 new maternal mortalities from the disease [18]. This was comparable to the WHO report which estimated morbidity to be 3,915 Ugandan women and 2,160 cervical cancer mortality [19]. Furthermore, annually, 40 women per 100,000 develop cervical cancer in Uganda and about ½ of these women die within 3 years of diagnosis [6]. Uganda Cancer Society showed that the cervical cancer burden was as high as 45 women per 100,000 as compared to the global incidence of 15 women per 100,000. It added that Uganda has 3 times the global burden of new cases of cervical cancer and projections show that by 2025, about 6,400 new cervical cancer cases and 4,300 deaths will occur annually [7]. However, the factors were different in the different regions of the country. In Uganda, an Oyam district study in the north revealed that of the 62.7% of women attending health services at the various Health center IIIs who had ever heard about cervical cancer, only 35.1% had ever screened [6]. Similarly, in 2 districts in Eastern Uganda, out of the 4.8% of women who knew, 37.2% had voluntarily gone for the screening [20]. At Mbarara Regional Referral Hospital, the proportion of cervical cancer was found to be high (25.2%) contributing to 10.1% of all gynecological diseases and 73.9% of all gynecological cancers [21]. In Isingiro, western Uganda among rural women; a 4.62% knowledge about cervical cancer but with only a 0.33% utilization rate of the screening services [22]. Cervical cancer is the most common malignancy of women in Uganda and over 80% of the women who report to the hospital are at the advanced stage of the disease where death is imminent [1]. However, there is no data on a comprehensive assessment of these and other associated factors in the study area. Therefore, this study intended to determine the factors among women 20 years or more attending KIU-Teaching Hospital (KIU-TH) to guide healthcare providers and other stakeholders to plan appropriately to deliver informed and evidence-based services to control and prevent morbidity and mortality from these insidious killer diseases.

METHODOLOGY

Study Design

A descriptive cross-sectional study design with both quantitative and qualitative data was used during April - August 2019.

Area of Study

The study was conducted at KIU-Teaching Hospital. The hospital is located in the town of Ishaka, Bushenyi district, Western Uganda, along the Mbarara- Kasese Road. It is approximately 77km (48miles), west of Mbarara town, the largest town in the sub-region.

Study Population

The study targeted all women 20 years or more attending the ANC and Maternal ward of KIU-TH.

Inclusion Criteria

All women 20 years or more attending the ANC and Maternal and GYN ward of KIU-TH, who have consented, were included in the study.

Exclusion Criteria

This study excluded critically ill women, emergency cases, and those who declined to consent.

Sample Size Determination

The sample size was determined using the Kirsch and Leslie, [23] formula.

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$$S = \frac{Z^2 \times P(1 - P)}{\delta^2}$$

Where;

S = the sample size

Z = 1.96 at 95% confidence interval.

δ = 5% Margin of error

P = 4.8%

Therefore, our sample size is;

S =

$$\frac{(1.96 * 1.96) * [(0.048)(1 - 0.048)]}{(0.05 * 0.05)}$$

Therefore; the sample size was 70 participants.

Sampling Procedure

A simple random sampling technique was employed in data collection. The researcher administered a standard questionnaire to the participants on their respective wards and whoever was present at that time of data collection was provided with a questionnaire.

Data collection

Standard questionnaires with open and closed questions were used as instruments for collecting data. These were administered to eligible participants to collect quantitative and qualitative data.

Research procedure

Women attending KIU-TH at ANC, GYN, and Maternity ward were sensitized and educated about the purpose of this study and assured of confidentiality of the information they will give. Those who will have accepted and are eligible, 20 years or more will consent by consent forms which were written in English and translated in Runyankole. The recruitment then took on immediately for the eligible patients who consented to participate in this study. Socio-demographic, personal, health facility-related, and intervening factors as previously illustrated in the conceptual framework were recorded through questionnaires.

Data Management

The questionnaire was pretested on 5 women at the gynecology ward at Kampala International University Teaching Hospital. Pre-testing will help in verifying any ambiguous question that may not have been addressed. The results of this pretest were used to modify the content and consistency of the questionnaire.

Data Management

The filled-in questionnaires were checked for validity and completeness before leaving the data collection site. Data was coded and it was entered correctly in the computer and backups were made for safe storage. The questionnaires were kept out of research to unauthorized persons.

Data Analysis

Data was analyzed using IBM Statistical Package for the Social Sciences (SPSS) version 20. Data sets were cross-tabulated using descriptive analysis, and presented in figures, proportions, percentages, correlations, central tendencies, and dispersions. Simple explanatory notes and conclusions were made following the analyzed data.

Ethical considerations

Approval was sought from the Research Ethics Committee of Kampala International University, Western Campus, and ethical concerns were addressed. Restricted access to the data collection forms by persons other than the principal researcher was ensured, because of the personal information which was included. The identity of the respondents will remain anonymous and confidential throughout the course of data handling. The respondents were properly informed upon this subject and neither will they be forced or influenced to answer any question as per the researcher's interest. Verbal consent by the researcher was obtained from the respondents who were informed about the importance of the study.

RESULTS

Table 1: Socio-demographic Characteristics of the study participants

Variables	Frequency (n=)	Percentage (%)
Age		
25 or less	23	32.9
26-35	33	47.1
>35	14	20.0
Religion		
Anglican	20	28.6
Catholic	31	44.3
Muslim	17	24.3
Born-Again	2	2.9
Level of Education		
Primary	18	25.7
Secondary	34	48.6
Degree	18	25.7
Marital status		
Single	12	17.1
Married	48	68.6
Divorced	10	14.3
Occupation		
Civil servant	25	35.7
Business	12	17.1
Student	26	37.1
Unemployed	7	10.0
Area of residence		
Ishaka Town	16	22.9
Bushenyi Village	27	38.6
Away from Bushenyi District	27	38.6
Number of children		
1 or none	28	41.8
2-3	32	47.8
>3	7	10.4

N=Frequency

%=Percentage

The level of utilization of cervical cancer screening services among women 20 years or more attending KIUTH.

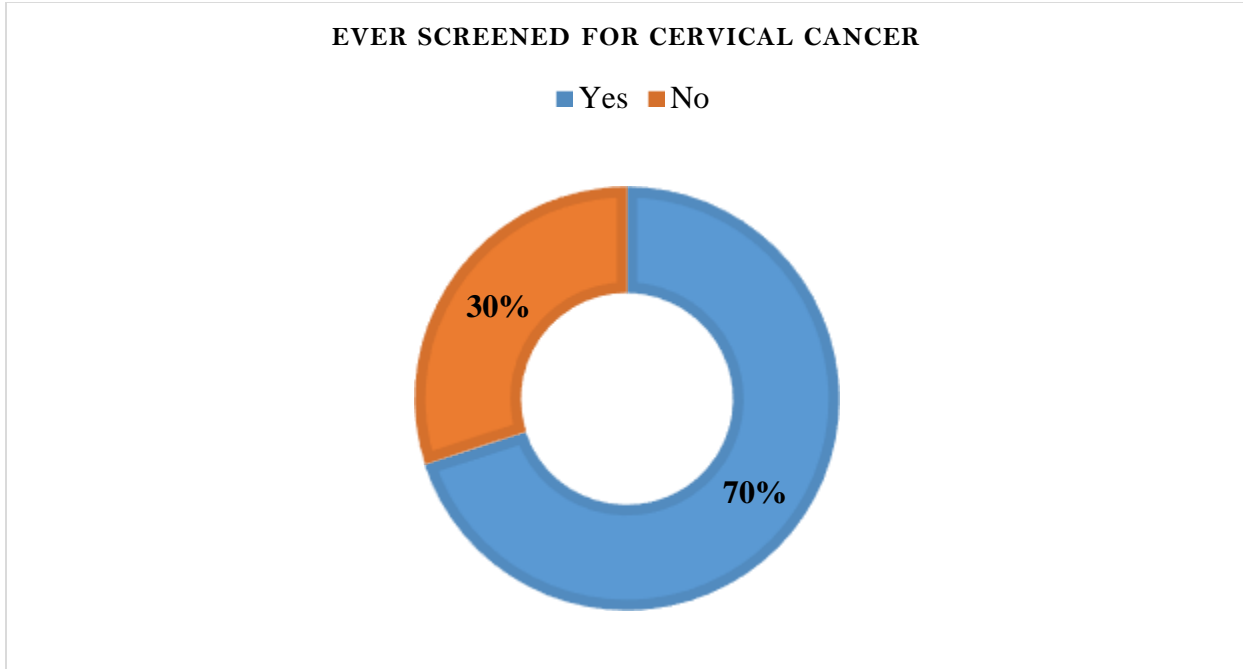


Figure 1: The level of utilization of cervical cancer screening services among women over 20 years attending KIUTH

According to the study findings, the majority 70% had ever screened for cervical cancer. The majority of these were reported screened using Pap smear (51.4%), VIA (37.1%), and Histology (11.4%).

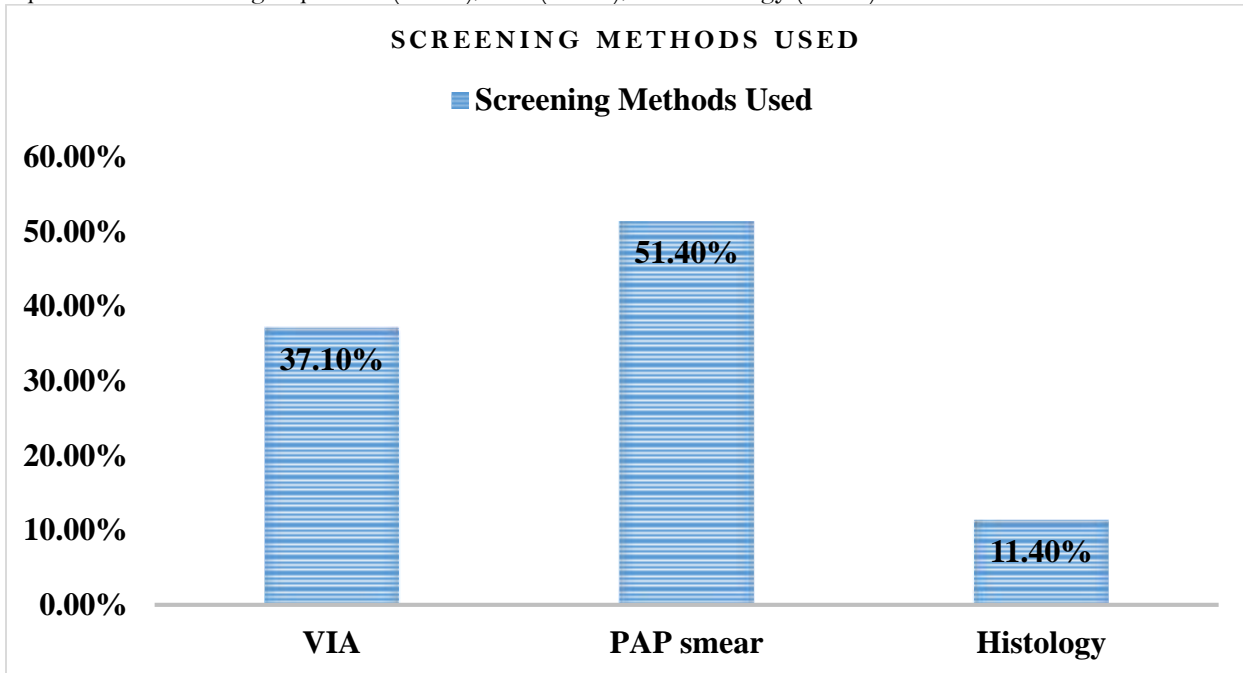


Figure 1: Methods used During the Cervical cancer Screening Services

The personal factors affecting the utilization of cervical cancer screening services among women 20 years or more attending KIUTH.

According to the study findings, the majority 56(80.0%) had ever heard about cervical cancer, of whom all 49(100.0%) had been screened already. Mostly 39(55.7%) acquired their information from Health workers and to a

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considerable extent 20(28.6%) from Media (TV/Internet). However, the majority 55(78.6%) and 36(73.5%) of the total study participants and those ever screened already put forth expensiveness as the main hindrance to cervical cancer screening. And some 8(11.4%) and 7(10.0%) put forth Fear of adverse outcomes and Inaccessible services as hindrances. Despite all that, 26(37.1%), 25(35.7%), and 19(27.1%) encouraged Regular screening, avoiding multiple sexual partners, and Avoiding early sex to play a big role in cervical cancer screening respectively. All this is normally part of the counseling at the health facility or from health workers concerned with such services which they claim are mostly expensive.

Table 2: The personal factors affecting the utilization of cervical cancer screening services among women over 20 years attending KIUTH

Variable	Ever Screened for cervical cancer		TOTAL [N(%)]
	Yes [N(%)]	No [N(%)]	
Ever heard about cervical cancer			
Yes	49(100.0%)	7(33.3%)	56(80.0%)
No	0(0.0%)	14(66.7%)	14(20.0%)
Source of information			
Health workers	28(57.1%)	11(52.4%)	39(55.7%)
Lectures	2(4.1%)	2(9.5%)	4(5.7%)
Media (TV/Internet)	13(26.5%)	7(33.3%)	20(28.6%)
Books	6(12.2%)	1(4.8%)	7(10.0%)
Hindrance to Cervical Cancer Screening			
Inaccessible services	7(14.3%)	0(0.0%)	7(10.0%)
Fear of adverse outcomes	6(12.2%)	2(9.5%)	8(11.4%)
Expensive	36(73.5%)	19(90.5%)	55(78.6%)
Cervical cancer Preventive measures taken			
Avoid early sex	12(24.5%)	7(33.3%)	19(27.1%)
Regular screening	20(40.8%)	6(28.6%)	26(37.1%)
Avoid multiple sexual partners	17(34.7%)	8(38.1%)	25(35.7%)

N=Frequency

%=Percentage

The health facility-related factors influencing women’s utilization of cervical cancer screening services at KIUTH.

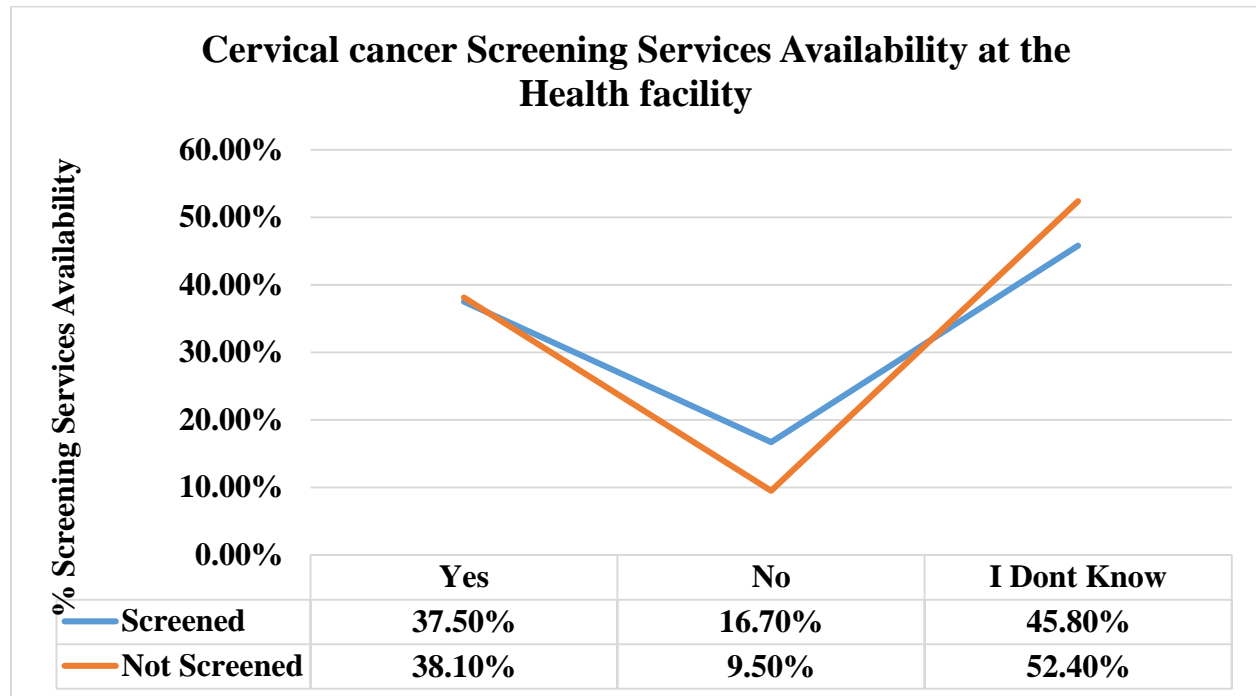


Figure 2: Cervical cancer Screening Services Availability at the Health facility

According to the study findings, the majority of those not screened (52.4%) were not aware of whether the services were available or not, 9.5% reported the services being unavailable whereas 38.1% did not screen despite knowing where the services were. Nonetheless, 42(85.7%) among the screened agreed that the services were available but this was not statistically significant. A significant effect was noted with health workers’ sensitization about STIs 44(89.8%); P-Value=<0.001, OR=9.68(2.74-34.15); 33(67.3%) further agreed that services cover cancer (cervical) prevention P-Value=0.001; OR= 6.60(2.05-21.23). Also, offering professional advice had 42(85.7%), P-Value=<0.001 and OR=9.75(2.97-32.05). and Once counseled, 33(82.5%) agreed that cervical cancer could be prevented; P-value=0.001, OR=10.37(2.73-39.42). See Table 3.

Table 3: The health facility-related factors influencing women’s utilization of cervical cancer screening services at KIUTH.

Variable	Ever Screened for cervical cancer		TOTAL N (%)	P-Value	OR [95% C.I.]
	Yes [N(%)]	No [N(%)]			
Cancer services available at your convent health facility					
Yes	42(85.7%)	16(76.2%)	58(82.9%)	0.333	1.88(0.52-6.77)
No	7(14.3%)	5(23.8%)	12(17.1%)	Ref	1
The health facility/health workers sensitize about infections (STIs)					
Yes	44(89.8%)	10(47.6%)	54(77.1%)	<0.001*	9.68(2.74-34.15)
No	5(10.2%)	11(52.4%)	16(22.9%)	Ref	1
Services cover Cancer (Cervical) Prevention					
Yes	33(67.3%)	5(23.8%)	38(54.3%)	0.001*	6.60(2.05-21.23)
No	16(32.7%)	16(76.2%)	32(45.7%)	Ref	1
They offer Counseling and professional advice					
Yes	42(85.7%)	8(38.1%)	50(71.4%)	<0.001*	9.75(2.97-32.05)
No	7(14.3%)	13(61.9%)	20(28.6%)	Ref	1
Can cancer be prevented once counseled					
Yes	33(82.5%)	5(31.2%)	38(67.9%)	0.001*	10.37(2.73-39.42)
No	7(17.5%)	11(68.8%)	18(32.1%)	Ref	1

*Statistically Significant, P-Value=<0.05 OR=Odds Ratios Ref=Reference category

DISCUSSION

The level of utilization of cervical cancer screening services among women 20 years or more attending KIUTH.

According to the study findings, the level of cervical cancer screening stands at 70% among women 20 years or older attending KIUTH. This is far better compared to a report in a study by Mulatu et al. [3] in which it was concluded that there was a poor utilization of screening services at 14.8%. Also, in another study, 41.9%; thus cervical cancer screening is very low among University of Botswana female students [24]. The majority of these reported screened using mostly Pap smear, followed by VIA and Histology. This is comparable to another study in which the majority had heard about the Pap smear and a good number took the test, which is relatively higher than in the study conducted by Hoque and Hoque [13]. Similarly, a study by Memirie et al. [25], concluded that only a few of the participants knew visual inspection via acetic acid, and the majority reported having used and aware of Pap smear. This could be generally a common issue the world over especially in Africa. Early screening for cancer facilitates chemotherapeutic efficacies and thus reduces cancer-related mortalities [26-28].

The personal factors affecting the utilization of cervical cancer screening services among women 20 years or more attending KIUTH.

All those that had been screened already acquired their information from the Health workers and to a considerable extent from Media (TV/Internet). This complements a study in which it was concluded that a lack of knowledge coupled with misconceptions about susceptibility impacted on college students' attitudes and behaviors regarding cervical cancer prevention [29]. However, being aware does not necessarily correspond to a correct understanding of the disease thus the need of addressing young female attitudes towards cervical cancer [29]. Also, multiple sexual partners and avoiding early sex play a big role in cervical cancer screening. This adds to a study in which women felt that the disease is mostly for unmarried women and those with multiple sexual partners, hence the reluctance [30]. All this is normally part of the counselling at the health facility or from health workers concerned with such services which they claim are mostly expensive. Despite all that, many encouraged regular screening, avoiding multiple sexual partners and avoiding early sex to play a big role in cervical cancer screening. This is comparable to a study done to assess barriers to utilization of cervical cancer screening in Ethiopia which reported that cervical cancer and the screening were associated with misconceptions such as promiscuity behaviors [31].

The health facility-related factors influencing women's utilization of cervical cancer screening services at KIUTH.

According to the study findings, the majority of those not screened (52.4%) were not aware of whether the services were available or not, 9.5% reported the services being unavailable whereas 38.1% did not screen despite knowing where the services were. A hospital-based study conducted among women of reproductive age to assess factors associated with cervical cancer screening revealed a lack of knowledge and awareness about cervical cancer prevention among the participants [30]. Nonetheless, service availability was not statistically significant. A significant effect was noted with health workers' sensitization about STIs which increased odds to 9.68(2.74-34.15) times to more likelihood to utilize the services. Similarly, services covering cancer (cervical) prevention were 6.60(2.05-21.23) more likely that one would utilize the services. This complements a study in which many feared that being diagnosed with a disease of the private parts may mean that the woman has cheated on her partner which may cause conflicts, hence the reluctance [30]. Furthermore, offering professional advice had 9.75(2.97-32.05) odds. And once counseled on how cervical cancer could be prevented it increased 10.37(2.73-39.42) more times to further utilize the services. As earlier reported, the fear of being diagnosed with cervical cancer has been reported as a barrier to cervical cancer screening among Kenyan women, where respondents believed that being diagnosed with a sexually transmitted disease is associated with promiscuous behaviors [32]. With such knowledge of the hindrances, focused counseling and guidance could actually aid in the increase of the utilization of the cervical cancer screening. The use of Religious leaders as champions of cervical cancer screening campaigns can yield an increased acceptance by women. This is because religious leaders are highly respected by women especially women residing in rural areas. Previous researchers have observed that the utilization of religious leaders as advocates for health promotion has proven to be helpful [33, 34].

CONCLUSION

The utilization level stands at a good position with up 70% to screening mostly using pap smear. On an individual level, Health workers and media increases awareness and thus utilization. Statistically, facilities/workers could further empower the utilization of cervical cancer screening through sensitization, counseling and guidance concerning utilization and prevention as well as demystifying misinformation on effects of such services, particularly the screening process. However, affordability, safety and accessibility of such services remain a hindrance to utilization of cervical cancer screening services.

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RECOMMENDATION

The stakeholders especially the health workers at the facility should emphasize and advise these women to go for screening through sensitization about the benefits and likely and/or possible effects of the failure to do so; this will address the levels of services utilization particularly screening and counseling which probably decrease the rampantly increasing morbidity as well as mortality associated with cancer in women. Massive free screening campaigns and vaccination as well as counselling and guidance sessions should further be advocated for to increase the coverage and lower misinformation surrounding the side effects of screening thus higher utilisation and subsequent lower morbidity. A special counselor should be installed at the facility to ensure that thorough and concrete information is given during the counseling exercise. Partners should be advised to continue being supportive and aid in any cervical cancer services/treatment process which lowers the possibility of cervical cancer.

REFERENCES

1. Adebayo, I. A. Prevalence of high-risk HPV types in women with cervical cancer in Eastern Uganda. *Journal of Biomedical and Clinical Sciences (JBSCS)*, 2021; 6(1), 45-56.
2. Centers for Disease Control and Prevention. (2018). Global Health - Uganda.
3. Mulatu, K., & Motma, A. iMedPub Journals Assessment of Knowledge , Attitude and Praticce on Cervical Cancer Screening among Female Students of Mizan Tepi University , Ethiopia. 2017; 2016, 1–6.
4. Eilu, E., Akinola, S. A., Tibyangye, J., Adeyemo, R. O., Odoki, M., Adamu, A. A., ... & Kato, C. D. Assessment of alternative approaches of primary cervical cancer screening among women in low-income environments. *Journal of Cancer Research and Experimental Oncology*, 2021;13(1), 1-9.
5. Eilu, E., Aliero, A. A., Odoki, M., Tibyangye, J., Akinola, S. A., Ntulume, I., ... & Kato, C. D. Prevalence of cervical intraepithelial neoplasia and its associated factors among women attending healthcare services in Eastern Uganda. *Journal of Cancer Research and Experimental Oncology*, 2020; 12(1), 1-12.
6. Waiswa, A., Nsubuga, R., Muwasi, M., Kimera, I., Ndikabona, G., Tusingwire, P. D., ... Akera, P. Knowledge and Attitude towards Cervical Cancer Screening among Females Attending out Patient Department in Health Centre IIIs in Oyam District. 2017; 55–62. <https://doi.org/10.4236/ojpm.2017.74005>.
7. Nattumbo, A. Attitudes , knowledge and perceptions towards cervical cancer messages among female university students. *Cogent Medicine*. 2018; 19, 1–7. <https://doi.org/10.1080/2331205X.2018.1451427>.
8. Eilu, E., Akinola, S. A., Odoki, M., et al. Prevalence of high-risk HPV types in women with cervical cancer in Eastern Uganda. *Journal of Biomedical and Clinical Sciences*. 2021; 6(1), 45-56
9. Obeagu, G. U. and Obeagu, E. I. An update on premalignant cervical lesions and cervical cancer screening services among HIV positive women. *Journal of Public Health and Nutrition*. 2023; 6(2):141.
10. Ukwenya, V. O., Afodun, A. M., & Quadri, K. K. Ultrasound diagnosis of cervical incompetence with cord prolapse. *Afr. J. Med. Med. Sci*, 2018; 47(1), 97-99.
11. Alum, E. U., Obeagu, E. I., Ugwu, O. P. C., Samson, A. O., Adepoju, A. O., Amusa, M. O. Inclusion of nutritional counseling and mental health services in HIV/AIDS management: A paradigm shift. *Medicine* 2023; 102:41(e35673). <http://dx.doi.org/10.1097/MD.00000000000035673>. PMID: 37832059; PMCID: PMC10578718.
12. Alum, E. U., Ugwu, O. P. C., Obeagu, E. I., Aja, P. M., Okon, M. B., Uti, D. E. Reducing HIV Infection Rate in Women: A Catalyst to reducing HIV Infection pervasiveness in Africa. *International Journal of Innovative and Applied Research*. 2023; 11(10):01-06. DOI: 10.58538/IJAR/2048. <http://dx.doi.org/10.58538/IJAR/2048>
13. Hoque, M. E., Ghuman, S., Coopoomay, R., & Van Hal, G. Cervical cancer screening among university students in south Africa: A theory based study. *PLoS ONE*. 2014;9(11). <https://doi.org/10.1371/journal.pone.0111557>.
14. Aja PM, Agu PC, Ezeh EM, et al. Prospect into therapeutic potentials of Moringa oleifera phytochemicals against cancer upsurge: de novo synthesis of test compounds, molecular docking, and ADMET studies. *Bulletin of the National Research Centre*. 2021; 45(1): 1-18. <https://doi.org/10.1186/s42269-021-00554-6>.
15. Ibiam, U. A., Uti, D. E., Ejeogo, C. C., Orji, O. U., Aja, P. M., Ezeani, N. N., Alum, E. U., Chukwu, C., Alope, C., Chinedum, K. E., Agu, P. and Nwobodo, V. In Vivo and in Silico Assessment of Ameliorative Effects of Xylopiia aethiopia on Testosterone Propionate-Induced Benign Prostatic Hyperplasia. *Pharmaceut Fronts*. 2023;5: e64–e76. DOI:10.1055/s-0043-1768477
16. Alum, E. U., Obeagu, E. I., Ugwu, O. P. C., Orji, O. U., Adepoju, A. O., Amusa, M. O. Edwin, N. Exploring natural plant products in breast cancer management: A comprehensive review and future prospects.

- International Journal of Innovative and Applied Research.* 2023; 11(12):1-9. Article DOI: 10.58538/IJAR/2055. DOI URL: <http://dx.doi.org/10.58538/IJAR/2055>
17. Shen, Z., Xue, C., Guffi, M., Zerm, R., Zhen, J., Bu, X., ... Ahn, J.-H. World Congress Integrative Medicine & Health 2017: part two. *BMC Complementary and Alternative Medicine.* 2017; 17(S1). <https://doi.org/10.1186/s12906-017-1783-3>.
 18. Uganda Bureau of Statistics. (2018). Demographic and Health Survey 2016. *Studies in Family Planning,* 28, 624. <https://doi.org/10.2307/2138118>.
 19. WHO and UN partners. (2015). Guatemala: WHO statistical profile. Country Statistics and Global Health Estimates. Retrieved from <http://www.who.int/gho/countries/gtm.pdf>.
 20. Ndejo, R., Mukama, T., Musabyimana, A., & Musoke, D. Uptake of cervical cancer screening and associated factors among women in rural Uganda: A cross sectional study. *PLoS ONE.* 2016; 11(2). <https://doi.org/10.1371/journal.pone.0149696>.
 21. Ronald, M., Andrew, C., Sezalio, M., John, K., Kayondo, M., Hamson, K., ... Mukasa, P. Cervical Cancer at Mbarara Regional Referral Hospital : Magnitude , Trends , Stages at Presentation , Impact of Acetic Acid Screening and the Need for Radiotherapy Services. 2016; 27, 126–139.
 22. Aheisibwe, H. Knowledge and Health Care Seeking Behaviours on Cancer of the Cervix among Rural Women- A Case Study of Isingiro District. *Journal of Health, Medicine and Nursing,* 21(December 2011), 2015; 15.
 23. Wiegand, H.: Kish, L.: Survey Sampling. John Wiley & Sons, Inc., New York, London 1965, IX + 643 S., 31 Abb., 56 Tab., Preis 83 s. *Biometrische Zeitschrift.* 10, 88–89 (1968). <https://doi.org/10.1002/bimj.19680100122>
 24. Fleeson, W., Jayawickreme, E., Jones, A. B. A. P., Brown, N. A., Serfass, D. G., Sherman, R. A., ... Matyjek, M. Factors Affecting The Utilisation Of Cervical Cancer Screening Among Women Attending Health Services In The Kumasi Metropolis Of Ghana. *Journal of Personality and Social Psychology.* 2017; 1(1), 1188–1197. <https://doi.org/10.1111/j.1469-7610.2010.02280.x>.
 25. Memirie, S. T., Habtemariam, M. K., Asefa, M., Deressa, B. T., Abayneh, G., Tsegaye. B., et al. Estimates of cancer incidence in Ethiopia in 2015 using population-based registry data. *J Glob Oncol.* 2018;2018:1–11.
 26. Alum, E. U., Inya, J. E., Ugwu, O. P.C., Obeagu, I. E., Alope, C., Aja, P. M., et al. Ethanolic leaf extract of *Datura stramonium* attenuates Methotrexate-induced Biochemical Alterations in Wistar Albino rats. *RPS Pharmacy and Pharmacology Reports.* 2023; 2(1):1–6. doi: 10.1093/rpsppr/rqac011.
 27. Obeagu, E. I., Ahmed, Y. A., Obeagu, G. U., Bunu, U. O., Ugwu, O. P. C. and Alum, E. U. Biomarkers of breast cancer: Overview. *Int. J. Curr. Res. Biol. Med.,* 2023; (1): 8-16. DOI:10.22192/ijcrbm.2023.08.01.002
 28. Alum, E. U., Famurewa, A. C., Orji, O. U., Aja, P. M., Nwite, F., Ohuche, S. E., et al. Nephroprotective effects of *Datura stramonium* leaves against methotrexate nephrotoxicity via attenuation of oxidative stress-mediated inflammation and apoptosis in rats. *Avicenna J Phytomed.* 2023; 13(4): 377-387. doi: 10.22038/ajp.2023.21903.
 29. Natterembo, A. Attitudes, knowledge and perceptions towards cervical cancer messages among female university students, *Cogent Medicine.* 2018; 5:1, DOI: 10.1080/2331205X.2018.1451427
 30. Ginsburg, O., Bray, F., Coleman, M. P., Vanderpuye, V., Eniu, A., Kotha SR, Sarker M, The global burden of women's cancers: a grand challenge in global health. *Lancet.* 2017 Feb 25;389(10071):847-860. doi: 10.1016/S0140-6736(16)31392-7.
 31. Bayu, H., Berhe, Y., Mulat, A., Alemu, A. Cervical Cancer Screening Service Uptake and Associated Factors among Age Eligible Women in Mekelle Zone, Northern Ethiopia, 2015: A Community-Based Study Using Health Belief Model. *PLoS One.* 2016 Mar 10;11(3):e0149908. doi: 10.1371/journal.pone.0149908.
 32. Morema, E.N., Atieli, H.E., Onyango, R.O. *et al.* Determinants of Cervical screening services uptake among 18–49-year-old women seeking services at the Jaramogi Oginga Odinga Teaching and Referral Hospital, Kisumu, Kenya. *BMC Health Serv Res* 14, 335 (2014). <https://doi.org/10.1186/1472-6963-14-335>.
 33. Alum, E. U., Ugwu, O. P. C., Obeagu, E. I., Orji, O. U., Edwin, N., Okon, M.B. Religious Leaders as Advocates for Promoting Exclusive Breastfeeding in East Africa. *International Journal of Innovative and Applied Research.* 2023; 11(12):10-15. Article DOI: 10.58538/IJAR/2056 DOI URL: <http://dx.doi.org/10.58538/IJAR/2056>

34. Alum, E. U., Ugwu, O. P.C., Obeagu, E. I. and Okon, M. B. Curtailing HIV/AIDS Spread: Impact of Religious Leaders. *Newport International Journal of Research in Medical Sciences (NIJRMS)*, 2023; 3(2): 28-31. <https://nijournals.org/wp-content/uploads/2023/06/NIJRMS-32-28-31-2023-rm.pdf>

CITE AS: Musubika Judith (2024). Factors Influencing Utilization of Cervical Cancer Screening Services among Women 20 Years or More Attending KIU-Teaching Hospital in Ishaka Bushenyi. NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES,5(1):118-128.