KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS CERVICAL CANCER SCREENING AMONG WOMEN OF REPRODUCTIVE AGE ATTENDING LUWEERO GENERAL HOSPITAL, LUWEERO DISTRICT. A CROSS-SECTIONAL STUDY.

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ABSTRACT

Introduction

Cervical cancer is the cancer of the uterine cervix it is the second most common cancer in women worldwide and the leading cause of cancer deaths in developing countries. In Uganda, cervical cancer is the leading cancer and cause of premature death among women aged 15-49 years.

Study objective

The study aims to determine knowledge, attitude, and practice toward cervical screening among women of reproductive attending Luweero General Hospital, Luweero district.

Methodology

A descriptive cross-sectional study design was carried out with both quantitative & qualitative data. The study was conducted at Luweero General Hospital in Luweero district from December 2022 to January 2023, and the sample was calculated. The simple random technique was employed in this study. A self -self-administered questionnaire that was specifically structured was used as a data collection tool. Data was analyzed with SPSS software version 17, by use of double entry.

Results

Concerning knowledge, 57 out of the 67 (85.1%) had heard about cervical cancer screening. In terms of attitude, 56(83.3%) agreed that they can go for cervical cancer screening when told that it is painless, simple, and good for early detection of cervical cancer. As for the practice, 32(52.2%) had never gone for cervical cancer screening.

Conclusion

The knowledge was average given majority 85.1% had heard about cervical cancer screening. The attitude was fairly good as well because 83.6% of the women agreed to get checked. However, the practice was very low given that 52.2% had never gone for cervical cancer screening.

Recommendation

Efforts should be made to have periodical screening against cervical cancer, offering health education on HPV, tobacco use, and condom promotion. Moreover, creating awareness about the availability of cervical cancer services to women of reproductive age attending Luweero General Hospital, Luweero district.

Keywords: Knowledge, Attitude, Practices, Cervical Cancer, Screening, Luweero district, Luweero General Hospital.

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INTRODUCTION.

Cervical cancer is cancer of the uterine cervix it is the second most common cancer in women worldwide and the leading cause of cancer deaths in developing countries. It is almost associated with human papillomavirus (HPV) infection. In addition to this infection, factors include multiparty, smoking, prolonged use of oral contraceptives, low socioeconomic status, sexually transmitted infections, sexual intercourse at younger age, and low immune status for example HIV infection. And factors related to poverty are associated with cervical cancer (Tilahun et al., 2019). Cervical cancer is said to be a preventive disease. The availability of efficient screening methods including Pap smears, HPV-DNA tests, and visual inspections using iodine and acetic acid is one explanation for this (Tilahun et al., 2019).

The HPV which spreads through sexual intercourse is believed to be responsible for almost all cervical cancers (CDC, 2022), although the HPV family of viruses includes more than 100 different viral genotypes, HPV 16 and 18 were identified in about 70% of cervical cancer cases, (Ahmed et al., 2017), while HPV 6 and 11 can cause genital warts (Ryndock & Meyers, 2014). If not detected and treated in a timely way, cervical cancer is nearly always fatal. In

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developing countries, mortality Rates are reported at 11.2 per 100, 000 women on average, almost three times the rate of developed Countries (Ferlay et al., 2014)

Despite cervical cancer being curable and easily noticeable in the early phase, merely 5% of women in less developed countries undertake routine check-ups for cervical cancer against over 40% of countries that are developed. In countries that have manifested a reduction in rates of cervical cancer, over 70% of women undergo cervical cancer screening. This explains why in Africa where access to screening is dismal most women go to health facilities when the disease has advanced to the invasive stage. Only 3.2% of women are reported to have undergone screening (WHO 2010)

The incidence rate for cervical cancer in Uganda is 54.8 per 100,000 women (Bruni et al., 2019), which is one of the world's highest age-adjusted cervical Cancer incidence rates. Hospital-based studies indicate that cervical cancer is the most common malignancy among women in Uganda accounting for 40 percent of all genital tract cancers and 8 percent of all malignancies (Mutyaba et al., 2006).

Cervical cancer is potentially preventable and effective screening programs can lead to reduced mortality and morbidity. The government of Uganda thus launched its strategic plans for the prevention and control of cervical cancer in 2010 by availing the screening programs readily at many hospitals. However, efforts to prevent and treat cervical cancer in Uganda have been hampered by poor access to screening facilities (Mutyaba et al., 2006).

The study aims to determine the knowledge, attitude, and practices of cervical cancer screening women of reproductive age attending Antenatal Care at Luweero General Hospital.

SPECIFIC STUDY OBJECTIVES

- I. To assess the knowledge of women of reproductive age attending Luweero General Hospital, Luweero district about Pap smear tests.
- II. To determine the attitude of women of reproductive age attending Luweero General Hospital, Luweero district towards cervical cancer screening.
- III. To determine the practices of women regarding pap smear tests and prevention of cervical cancer.

RESEARCH METHODOLOGY Study design

A descriptive cross-sectional study was carried out with both quantitative and qualitative methods to assess the knowledge, practices, and attitudes on cervical cancer screening among women of reproductive age between 15-49 years attending Luweero General Hospital.

Study area

Luweero General Hospital is a hospital in Luweero district in the Central Region of Uganda. The hospital was established by the government of Uganda and is in full operation. The hospital has departments and clinics which include, a dental clinic, eye clinic, orthopedic department, and laboratory. There are also medical wards which include the main operating theatre, male medical ward, female medical ward, pediatrics ward, obstetrics and gynecology ward.

The study was conducted in a month from December 2022 to January 2023.

Study population

All women of reproductive age, aged 15-49 years attending Luweero General Hospital from December 2022 to January 2023 who are residents of Luweero district for more than three months.

Inclusion criteria.

Only women of reproductive age between 15 and 49 years visiting Luweero General Hospital from December 2022 to January 2023 were included

Exclusion criteria.

Qualified women who are in a critical condition Women who are mentally ill

Sample size determination

The sample size is the number of observations in a sample. The sample size was calculated using the formula below; n= \underline{N} (LoBiondo and Heber, 2014)

1+N (e)² Where; n = desired sample s N is the target population; N 80e is the expected error at a standard interval of 95% and e is 5% n= $\frac{80}{1+80(0.05)^2}$ n=67 people Therefore, a minimum of 67 participants were sampled

Sampling technique

A simple random technique was employed in this study. The study sample was conducted in Luweero General Hospital

where women of reproductive age between 15-49 years were selected randomly and requested to participate in the study after signing the consent form.

Data collection method

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Data was collected by a questionnaire method where both open-ended and closed-ended questions were used and translation was done for those respondents who did not understand the English language since not every woman attending Luweero General Hospital was able to speak English

Data collection tools

A self-administered questionnaire that was specifically structured was used for the study. After the respondents were selected, questions on their demographics, knowledge, attitude, and practices about cervical cancer screening were asked.

Data collection procedure

The participants were selected randomly from among women of reproductive age attending Luweero General Hospital. The purpose of the study was explained to the participants, and they were informed that their participation should be voluntary without any coercion or monetary rewards. The participants were assured of confidentiality regarding their identity during and after the research had been conducted. They then signed the consent form before filling in the questionnaires. Participants who did not understand English were helped by the research assistants to fill in the questionnaires based on their responses to the questions after being translated to them.

Quality control

Quality control through conducting induction and training of research assistants was ensured. The questionnaire was also pre-tested before conducting the primary study and where modifications warranted, they were done.

Data analysis

Each questionnaire was checked for completeness, missed values, and unlikely responses. Then manually cleaned up on such indications. Data was analyzed with SPSS software version 17, by use of double entry, the data was checked for consistency and accuracy. Later the responses and observations given were tallied, recorded then presented in graphs, charts, and tables.

Ethical considerations

The research project was subjected to approval by the Kampala School Of Health Sciences institution research ethics review board and then clearance was obtained. Permission was obtained from the authority of Luweero General Hospital.

Informed consent was obtained from all participating in the course of this study and the questionnaires did not bear the names of the respondents of this research project to observe confidentiality in the course of the study process.

STUDY FINDINGS. Demographic data.

It was necessary to first determine the characteristics of the respondents in aspects of age, employment status, religious affiliation, highest level education, and marital status.

Table 1.1: Shows the distribution of	of respondents a	ccording to demo	graphic data. (N=6	7)
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RESPONSE		
	FREQUENCY	PERCENTAGE %
AGE (YEARS)		
>20	11	16.4%
20-29	32	47.8%
30-39	14	20.9%
40-49	10	14.9%
Total	67	100%
NUMBERS OF CHILDREN		
None	16	23.9%
1-4	39	58.2%
5 and above	12	17.9%
Total	67	100%
RELIGIOUS AFFILIATION		

Anglican 21 31.3% 20.9% Musli 14 m Cathol 26.9% 18 ic 20.9% Others 14 Total. 100% 67

A total of 67 women participated in the study with a response rate of 100%. The findings as presented in Table 1.1, show the age distribution of the respondents and indicate that 11(16.4%) were below 20 years 32(47.8%) were between the age of 20-29 years, and 14(20.9%) where between the age of 30-39 and 10 (14.9\%) where within the range of 40-49 years. The majority of the respondents were between the ages of 20-29. Which were 32(47.8%) whereas

the least respondents were between 30-39 years of age. In regards to several children, 16(23.9%) women did not have children, 39(58.2%) women had 1 up to 4 children women whereas 12(17.9%) of the total respondents had more than 5 children. The study also indicated that 21(31.3%) of the women were Anglican, 14(20.9%) of the women were Muslims, 18(26.9) were Catholics and 14(20.9%) of the women were from other religious affiliations.

Table 1.2: Shows the distribution of re	pondents according to de	emographic data. (N=67)
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RESPONSE		
	FREQUENCY (F)	PERCENTAGE (%)
MARITAL STATUS	·	• · · · ·
Married	27	40.3%
Single	28	41.8%
Divorced	12	17.9%
Total	67	100%
EMPLOYMENT STAT	TUS TUS	
None	27	40.3%
Self employed	25	37.3%
Employed by others	15	22.4%
Total	67	100%
LEVEL OF EDUCATION	ON	
None	06	9%
Primary	24	35.8%
Secondary	14	20.9%
Post-secondary	23	34.3%
Total	67	100%

The findings obtained from the 67 respondents showed that 27(40.3%) were married, 28(41.8%) were single and 12(17.9%) were divorced. In terms of employment status 27(40.30%) of the women were not employed, 25(37.3)

were self-employed, and 15(22.4%) were employed by others.

Knowledge of cervical cancer screening.

The respondents were asked whether they had ever heard about cervical cancer.

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Figure 1: Knowledge of the respondents on cervical cancer screening (N=67)

According to the results, it showed that the majority of the respondents had heard about cervical cancerthat is 57(85.1%), and 10(14.9%) haven't.

How can you prevent cervical cancer?	Frequency(n)	Percentage (%)
Did not know how to prevent	48	71.6%
Avoiding early-age marriage	3	4.5%
Attending to early treatment	2	3%
Avoiding contraceptives	1	1.5%
Having one sexual partner	8	11.9%
Early treatment of STDs	3	4.5%
Vaccination	2	3%
Total	67	100%

Table 2: Presents results of knowledge on the prevention of cervical cancer. (N=67)

Table 2 Presents results of knowledge on the prevention of cervical cancer whereby the majority 48(71.6%) of the women did not how to prevent cervical cancer, 3(4.5%) of the women said that by avoiding early age of marriage, 2(3%) of the women said that cervical cancer can be prevented by attending to early treatment, 1(1.5%) of them

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said that by avoiding contraceptives,8(11.9%) by having one sexual partner, 3(4.5%) of them said that cervical cancer can be prevented by early treatment of STDs than the rest of the women which were 2(3%) knew that cervical cancer can be prevented by vaccination.

Table 3: shows results on knowledge of women about being at risk of cervical cancer. (N = 67)

(14=07)				
Do you think you are at risk for cervical cancer?	Frequency(n)	Percentage (%)		
Yes	40	59.7%		
No	27	40.3%		
Total	67	100%		

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Table 3 shows that more than half of the respondents 40(59.7%) thought that they were at risk of cervical cancer and less than half of the respondents 27(40.3%) didn't think that they were at risk.

Table 4: Presents results on knowledge of the risk factors that can lead to cervical cancer. (N=67)

Knowledge of the risk factorsthat can lead to	Frequency	Percentage
cervical cancer.	(n)	(%)
Sexual transmitted disease	8	11.9%
Smoking	9	13.4%
Multiple partners	16	24%
Early age of marriage	8	11.9%
Use of contraceptive	13	19.4%
I don't know	13	19.4%
Total	67	100%

Table 4 showed that the majority of the women knew the risk factors of cervical cancer and few respondents didn't know 13(19.4%). Some said sexually transmitted diseases 8(11.9%), others smoking 9(13.4%), many thought

multiples partners 16(24%), a few 8(11.9%) believed early age marriage. Moreover, use of contraceptive 13(19.4%). These were the risk factors mentioned by the respondents.

Table 5: presents the results of women who had never heard about Pap smear tests. (N-67)

(11-07)				
Have you heard about the pap smear test?	Frequency(n)	Percentage (%)		
Yes	43	64.2%		
No	24	35.8%		
Total	67	100%		

Table 5 presented results that the majority of the women 43(64.2%) had heard about the pap smear test, and 24(35.8%) had not heard about the pap smear test.

Table 6: Attitude towards Pap smear test. (N=67)			
If you were told that a pap smear test is simple, painless, and good for the early detection of cervical cancer, would you like to go for one?	Frequenc y(n)	Percentag e (%)	
Yes	56	83.6%	
No	11	16.4%	
Total	67	100%	

Attitude towards cervical cancer screening.

Table 6 shows that the majority of the respondents 56(83.6%) agreed to go for a pap smear test, and the minority of 11(16.4%) did not agree to go for a pap smear test even if it was simple, painless and good for them.

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Table 7: Attitude toward awareness of cervical cancer screening (N=67)

Do you think screening forcervical cancer in women should continue?	Frequen cy(n)	Percentage (%)
Yes	64	95.5%
No	3	4.5%
Total	67	100%

Table 7 demonstrates that the majority 64(95.5%) of the respondents thought that screening forcervical cancer should continue and the least 3(4.5%) thought that it is not needed.

Do you think it's necessary to screen for cervical Frequency (Percentage			
cancer?	n)	(%)	
Yes	65	97.0%	
No	2	3.0%	
Total	67	100%	

Table 8: Attitude on regular screening for cervical cancer. (N=67)

Table 8 shows that the majority 65(97.0%) of the respondents agreed that it's necessary to screen for cervical cancer, while the rest said it's not necessary and that was 2(3.0%).

Practice toward cervical cancer screening

Table 9: Practice of respondents towards cervical cancer screening. (N=67)

Have you	ever	gone	for cervical	Frequency(Percentage
cancer screening	g?			n)	(%)
Yes				35	52.2%
No				32	47.8%
Total				67	100%

Table 9 presents the results of the women's practice toward cervical cancer screening. According to the results, it showed that more than half of the respondents had gone for screening, that is 35(52.2%). And 32(47.8%) had never gone for cervical cancer screening.

Table 10: Shows the results of those who had ever gone for cervical cancer screening (N=35)

If yes what were the	Frequency(n)	Percentage (%)
results after screening:		
Positive	04	11.4%
Negative	24	68.6%
I don't know the results	07	20%
Total	35	100%

Based on Table 9 shows 35 women who went for cervical cancer screening. Table 10 shows that 4(11.4%) of the 35

women were positive, 24(68.6%) of them were negative and 7(20%) of the women did not know their results after being screened.

DISCUSSION

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Knowledge of cervical cancer screening.

The overall knowledge of women concerning cervical cancer screening was above average. majority of the women had heard about cervical cancer which is 85.1% and the least of the respondents had not heard about it that's 14.9%. The proportion is higher than that reported in Oyam District in Uganda, where only 62.7% had ever heard about cervical cancer (Waiswa et al., 2017). whereas it is lower than the study done in (Ojok, 2022) which was 97.9%. this can be due to a large number of women being sampled. The results of knowledge on prevention of cervical cancer showed that majority 48(71.6%) of the women did not know how to prevent cervical cancer, 3(4.5%) of the women said that by avoiding early age of marriage, 2(3%) of the women said that cervical cancer can be prevented by attending to early treatment, 1(1.5%) of them said that by avoiding contraceptives,8(11.9%) by having one sexual partner, 3(4.5%) of them said that cervical cancer can be prevented by early treatment of STDs than the rest of the women which were 2(3%) knew that cervical cancer can be prevented by vaccination, the majority didn't know how to prevent cervical cancer which means that the women in Luweero need more health education on cervical cancer prevention, only 19(28.4%) knew how to prevent cervical cancer.

The women knew the risk factors of cervical cancer and few respondents didn't know 13(19.4%). Sexually transmitted diseases 8(11.9%), smoking 9(13.4%), multiple partner 16(23.9%), Early age of marriage 8(11.9%), Use of contraceptive 13(19.4%) were the risk factors mentioned by the respondents. The majority of the women had heard about pap smear tests 43(64.2%) and few had not heard about pap smear tests 24(35.8%)

Attitude towards cervical cancer screening.

The respondents in this study majority of them had a positive attitude towards cervical cancer screening. The majority of the respondents 56(83.6%) agreed to go for a pap smear test, and the least 11(16.4%) did not agree to go for a pap smear test even if they were told that it was to be simple, painless, and good. In the study done in Qatar, almost 40% had had a pap smear done at least once. 85.5% of the rest would have a test done if they were told that it was painless, simple, and good (Al-Meer et al., 2011).

The majority of the respondents 95.5% thought that cervical cancer screening was important and should continue although 4.5% thought that cervical cancer screening should not continue. This connection between impressive knowledge and positive attitude seen in this study is just a

replica of results from other studies like Borlu et al., (2016) in Turkey, also in Malaysia by Maharajan et al. (2015), that in Nepal by Shrestha et al. (2013) and the one in Zaria, Nigeria by Ahmed et al. (2013) where most respondents exhibited a fair knowledge of cervical cancer screening.

It is not always, though, that impressive or adequate knowledge always translates into a positive attitude. Though it appears so in this study, the truthfulness of the above statement has been proven quite several times in previous studies. negative attitude despite impressive knowledge was evident in a study carried out at Hawassa University College where despite a good number of them (76.88%) being knowledgeable (44.7) of them had a negative attitude (Tsegaye et al., 2018). This was also the case among HCWs (Anantharaman et al., 2012) In Chennai, Tamil, Nadu, India, a study was carried out on the knowledge, attitude, and practice of cervical cancer screening among female healthcare providers in 2013, even though the knowledge was impressive(100%) of the health workers, their attitude was not that good because only 57.9% felt that they were at risk of cervical cancer and their practice was even worse only 18.4% had ever screened for cervical cancer (Anantharaman et al., 2012) and this was not far from results in an International University in japan that was conducted in 2012 by Ghotbi and Anai (2012). They found that the student's knowledge of the risk factors of cervical cancer was very low and did not screen for cancer (Ghotbi & Anai, 2012)

Practice on cervical cancer

The adequate positive attitudes of the respondents did not translate into good practice!

Only 35(52.2%) of the respondents had gone for cervical cancer screening and 32(47.8%) had never gone for cervical cancer screening. Several other studies in the past have recorded dismal results as far as practice concerning cervical cancer screening Most of the studies reported poor practice among the study participants, in Kathmandu, Nepal only 10.5% of the respondents had gone for Pap smear test (Shrestha et al., 2013). The same also was shown in the study done in Nigeria, despite health education among adult women of rural Nigeria, there was no significant change in practice concerning cervical cancer screening. The proportion of women who had undertaken cervical cancer screening after education changed from 4.3% to 8.3% (p = 0.0038) (Abiodun et al., 2014). some also in female health care providers of the Chennai corporation back in 2013 were found to have an above average knowledge and attitude towards cervical cancer screening about 57.9% felt that they were at risk of cervical cancer while about 80.4% felt that they should undergo cervical cancer screening for themselves. (Anantharaman et al., 2012). In Chennai, Tamil, Nadu, India, a study was carried out on the knowledge,

attitude, and practice of cervical cancer screening among female healthcare providers in 2013, their practice was even worse only 18.4% had ever screened for cervical cancer (Anantharaman et al., 2012) and this was not far from results in an International University in japan that were conducted in 2012 by Ghotbi and Anai (2012). They found that the

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student's knowledge of the risk factors of cervical cancer was very low and did not screen for cancer (Ghotbi & Anai, 2012)

The results of the 35 women who had ever gone for cervical cancer screening, so the study showed that 4(11.4%) of the 35 women were positive 24(68.6%) of them were negative, and 7(20%) women did not know their results after being screened.

What comes out is that despite variable levels of knowledge and variable attitudes, practice is universally poor when it comes to cervical cancer screening.

CONCLUSIONS.

The knowledge of the women of reproductive age attending Luweero General Hospital, Luweero district concerning cervical cancer screening was average given that 57(85.3%) of respondents had heard about cervical cancer screening.

The attitude of the women of reproductive age attending Luweero General Hospital concerning cervical cancer was generally good, in view Majority of the respondents 56(83.6%) agreed to go for a pap smear test the least of 11(16.4%) did not agree to go for pap smear test even it was to be simple, painless and good.

The practice of the women of reproductive age attending Luweero General Hospital, Luweero district concerning cervical cancer screening was poor necessitating timely and appropriate interventions given these findings on the women's practice on cervical cancer screening. According to the results, it showed that more than half of the respondents had heard about cervical cancer screening that is 35(52.2%) and 32(47.8%) had never gone for cervical cancer screening.

RECOMMENDATION

The women of reproductive age attending Luweero General Hospital, Luweero district.

Make efforts to have them periodically screened against cervical cancer.

Those with male friends and younger siblings, who are not yet sexually active, should advise them to get circumcised.

The women who never went for HPV vaccination during the recommended age of 9-13 years and have children who are not yet sexually active, and are not yet vaccinated should take them for vaccination, they can still get the vaccine but now three doses at the encounter, after one month, then 6

months.

Those who cannot be faithful to one partner should use a condom at every sexual encounter.

Tose with male or female friends and themselves who are smoking should be advised to stop smoking tobacco.

The management and staff of Luweero General Hospital Luweero district.

Officering health education on HPV, and cervical cancer screening to women of reproductive ageattending Luweero General Hospital Luweero District.

Offer to its clients both males and females more health education and warnings about tobacco use, condom promotion/provision for those engaged in sexual activity, and male circumcision.

The ministry of health.

To organize more health education on the benefits of cervical cancer screening.

Educating communities' especially girl children and their parents about the benefits of HPV.

Raising awareness about the availability of cervical cancer screening services.

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ABBREVIATIONS

- HPV: Human papilloma virus.
- HIV: Human Immunodeficiency Virus.
- **AIDS:** Acquired immunodeficiency syndrome.
- **WHO:** World Health Organization
- PAP: Papanicolaou.
- HC: Health Care Workers

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There was no conflict of interest

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REFERENCE

Abiodun, O., Olu-Abiodun, O., Sotunsa, J., & Oluwole, F. A. (2014). Impact of health education intervention on knowledge and perception of cervical cancer and cervical screening uptake among adult women in rural communities in Nigeria. *BMC Public Health*, *14*(1). https://doi.org/10.1186/1471-2458-14-814

Ahmed, H. G., Bensumaidea, S. H., Alshammari, F. D., Alenazi, F. S. H., ALmutlaq, B. A., Alturkstani, M. Z., & Aladani, I. A. (2017). Prevalence of Human Papillomavirus subtypes 16 and 18 among Yemeni Patients with Cervical Cancer. *Asian Pacific journal of cancer prevention: APJCP*, *18*(6), 1543–1548. https://doi.org/10.22034/APJCP.2017.18.6.1543

Ahmed, S. A., Sabitu, K., Idris, S., & Ahmed, R. S. (2013). Knowledge, attitude, and practice of cervical cancer

screening among market women in Zaria, Nigeria. *Nigerian Medical Journal: Journal of the Nigeria Medical Association*, 54(5), 316. https://doi.org/10.4103/0300-1652.122337

Al-Meer, F. M., Aseel, M. T., Al-Khalaf, J., Al-Kuwari, M. G., & Ismail, M. F. S. (2011). 855 Knowledge, attitude and practices regarding cervical cancer and screening among women visiting primary health care in Qatar. *Eastern Mediterranean Health Journal*, *17*(11), 855–861. https://doi.org/10.26719/2011.17.11.856

Anantharaman, V., Sudharshini, S., & Chitra, A. F. (2012). A cross-sectional study on knowledge, attitude, and practice on cervical cancer and screening among female health care providers of Chennai corporation, 2013. *Journal of Academy of Medical Sciences*, 2(4), 124. https://doi.org/10.4103/2249-4855.141132

Borlu, A., Günay, O., Balcı, E., & Sağıroğlu, M. (2016). Knowledge and Attitudes of Medical and Non-Medical Turkish University Students about Cervical Cancer and HPV Vaccination. *Asian Pacific Journal of Cancer Prevention*, 17(1), 299–303.

https://doi.org/10.7314/apjcp.2016.17.1.299

Bruni L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, Bosch F, de Sanjosé S. (2019) *ICO/IARC information centre on HPV and cancer (HPV information Centre). Human papillomavirus and related diseases in the world.*

Summary report 17 June 2019.

CDC. (2022). *STD Facts - Human papillomavirus (HPV)*. https://www.cdc.gov/std/hpv/stdfact-hpv.htm

Ferlay, J., Soerjomataram, I., Dikshit, R., Eser, S., Mathers, C., Rebelo, M. S., Parkin, D. M., Forman, D., & Bray, F. (2014). Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. *International Journal of Cancer*, *136*(5). https://doi.org/10.1002/ijc.29210

Ghotbi, N., & Anai, A. (2012). Assessment of the Knowledge and Attitude of Female Students towards Cervical Cancer Prevention at an International University in Japan. *Asian Pacific Journal of Cancer Prevention*, *13*(3), 897–900. https://doi.org/10.7314/apjcp.2012.13.3.89

LoBiondo-Wood, G., & Haber, J. (2014). Nursing Research: Methods and Critical Appraisal for Evidence-Based Practice. *Journal of Nursing Regulation*, 5(1), 60. https://doi.org/10.1016/s2155-8256(15)30102-2

Maharajan, M. K., Rajiah, K., Num, K. S. F., & Yong, N. J. (2015). Knowledge of Human Papillomavirus Infection, Cervical Cancer, and Willingness to Pay for Cervical Cancer Vaccination among Ethnically Diverse Medical Students in Malaysia. *Asian Pacific Journal of Cancer Prevention*, *16*(14), 5733–5739.

https://doi.org/10.7314/apjcp.2015.16.14.5733

Mutyaba, T., Mmiro, F., & Weiderpass, E. (2006). Knowledge, attitudes, and practices on cervical cancer screening among the medical workers of Mulago Hospital, Uganda. *BMC Medical Education*, 6(1). https://doi.org/10.1186/1472-6920-6-13

Ojok, S. (2022) 'Assessing Knowledge, Attitude, and Practices of Women of Reproductive Age (15-49) Towards Cervical Cancer Screening in Adyel Division, Adyel Ward, Lira City West Division, Lira City', *Journal of Biomedicine and Biosensors*, 2(2), pp. 11–30. Available at: https://gpub.org/article-details.php?article-id=64.

Eric J Ryndock & Craig Meyers (2014) A risk for nonsexual transmission of human papillomavirus?, Expert Review of Anti-infective Therapy, 12:10, 1165-1170, DOI: <u>10.1586/14787210.2014.959497</u>

Shrestha, J., Saha, R., & Tripathi, N. (2013). Knowledge, Attitude, and Practice regarding Cervical Cancer Screening Amongst Women Visiting Tertiary Centre in Kathmandu, Nepal. *Nepal Journal of Medical Sciences*, 2(2), 85–90. https://doi.org/10.3126/njms.v2i2.8941

Tilahun, T., Tulu, T., & Dechasa, W. (2019). Knowledge, attitude, and practice of cervical cancer screening and associated factors amongst female students at Wollega University, western Ethiopia. *BMC Research Notes*, *12*(1). https://doi.org/10.1186/s13104-019-4564-x

Tsegaye S, Mengistu D, Gultie T. Knowledge and attitude towards cervical cancer screening and associated factors among female Hawassa University College of Medicine and

health sciences students. MOJ Public Health. 2018;7(3):151?158. DOI: <u>10.15406/mojph.2018.07.00221</u> Waiswa, A., Nsubuga, R., Muwasi, M., Kimera, I., Ndikabona, G., Tusingwire, P. D., Maghanga, M., Ovuga, E., & Akera, P. (2017). Knowledge and Attitude towards Cervical Cancer Screening among Females Attending Page | 11 Outpatient Department in Health Centre in Oyam District. Open Journal of Preventive Medicine, 07(04), 55-62. https://doi.org/10.4236/ojpm.2017.74005 WHO (2010) WHO/ICO Information Centre on HPV and

Cervical Cancer (HPV Information Centre) Human Papillomavirus and Related Cancers in World. Summary Report. Available at www. who. int/ epicenter

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