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Original Article

A CROSS-SECTIONAL STUDY ON FACTORS CONTRIBUTING TO LOW UPTAKE OF HUMAN PAPILLOMAVIRUS VACCINATION AMONG FEMALES AGED 10-12 YEARS ATTENDING ADJUMANI GENERAL HOSPITAL, ADJUMNI DISTRICT.

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ABSTRACT.

Background:
Specific objectives of the study were to find out individual, community, and health facility factors contributing to low uptake of HPV (HUMAN PAPILLOMAVIRUS**)** vaccination among females aged 10-12 years attending Adjumani General Hospital, Adjumani district.

Methodology:
The study adopted a cross-sectional descriptive quantitative research design involving 50 participants who were the parents of females between 10-12 years and were sampled by simple random sampling. Data was collected using questionnaires written in closed-ended questions. This data was analyzed manually using calculators, tables, bar graphs, and pie- charts.

Results:
Regarding Individual factors, 58% were unaware of HPV vaccination, 56.2% failed to afford the vaccine, 46.7% said the vaccine was ineffective, and 33.3% did not consider HPV as a common infection.
In regards to the community factors, the majority (58%) of the respondents agreed the vaccination program had everbeen extended to their community while the minority (42%) of the respondents denied that the vaccination program had never been extended to their community.
Regarding health facility factors, 37% of the vaccine was out of stock, 54% inaccessibility of the hospital, 42.3% were concerned about the Pap smear screening test, and 32.4% said that the health workers were inadequately trained for the vaccination.

Conclusion:
The factors contributing to the low uptake of HPV vaccination among females aged 10-12 years attending Adjumani General Hospital were the cost, unawareness, COVID-19, rumors, community leaders, inaccessibility of the hospital, Pap smear concerns, inadequate training of the health workers, and vaccine out of stock.

Recommendation:
The Ministry of Health lays out strategies on how to get that age bracket vaccinated for HPV. There is a need to increase knowledge of individuals through Health Education about HPV infection and vaccination, maintaining a steady supply of free HPV vaccine.

Keywords: Human Papillomavirus, Vaccination, Adjumani General Hospital, Females
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BACKGROUND.

Human papillomavirus is the name of 200 known types of viruses that can cause abnormal tissue growth and other changes to cells. And it's the most common sexually transmitted infection in the United States associated with increased cancer risks with an estimated 79 million Americans currently infected with HPV, with an estimated 14 million new infections developing each year, almost half of these 15 to 24 years old.
There are about 14 high-risk HPV types including HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68 however the low-risk HPVs Although most HPV strains do not cause disease, a few low-risk variants can produce warts on or around the genitals, mouth, or throat. National Cancer Institute (2023).
16 and 18 are responsible for nearly (50%) of high-grade cervical pre-cancer (Wikipedia,2024). A large majority of cervical cancer globally more than (95%) is due to the human papillomavirus, with an estimated 604,000 new cases every year.
This HPV and cervical cancer is caused mainly due to sexual contact and most people get HPV infections shortly after the onset of sexual activity bringing cardinal symptoms such; as

small rough lamps (genital warts) that can appear on the vagina or anus for the case of women, they are painful, itchy or bleed or cause swollen glands. Cervical cancer presents with bleeding between periods or after sexual intercourse or foul-smelling vaginal discharge. This cancer has created a global threat annually the WHO had to therefore provide ways of preventing it through screening and vaccination of girls 9 to 15 years before their sexual debut

Globally, just one in eight girls is vaccinated against HPV the leading cause of cervical cancer UNICEF,2023. Although the momentum of vaccination was building before the pandemic, the HPV vaccination programs were severely affected by COVID-19. Therefore, worldwide by 2019-2021 only (15%) of the population got the two doses of the HPV vaccine and this rate dropped to

(13%) during the COVID-19 period meaning up to 3.5 million and more girls missed out on the HPV vaccination which makes this a poor coverage.

Despite the HPV vaccine being available for 15 years dose completion remains as low as (20%) in Africa compared to (77%) in Australia and New Zealand. Currently, 26 countries in the African region have introduced the HPV vaccine Amponsah Dacosta et al.,2022**.** - However, in Sub-Sahara Africa since its inception in 2014, South Africa's HPV vaccination coverage rate stands at (61%) for those who have completed the full dose recommended but up to (75%) are still lagging in the first dose. Despite this vaccination coverage, dose completion rates have persistently followed a downward trend, slowing progress toward attaining the global elimination target. Evidence shows inadequate reminders are a major cause of the decline in uptake. The uptake rate is at (13.8%) in eastern Uganda and Nigeria is reported to be at (2.6%).

According to Okolie et al., 2023, in Nigeria, an estimated incidence of 12,100 patients with cervical cancer and 8,000 deaths in 2020 puts cervical cancer as the second leading cause of death in Nigeria behind breast cancer. With all this alarming threat Nigeria remains among those countries that are yet to introduce HPV vaccines. Evidence shows that high prices and overstretched budgets are reasons for not enrolling in the HPV vaccination in Nigeria.

Uganda rolled out the HPV vaccination in 2015 adopting two strategies, the school-based and the static routine immunization services. The uptake of HPV vaccination in Uganda remains as low as (17.6%) of which (73.8%) stands for those yet to receive the first dose and (17.3%) for the population who are just waiting to get the second dose. The uptake is (19.6%) among the school girls aged 9-15 years in Lira city, northern Uganda. Predictors that were associated with the HPV vaccine uptake included; recommendations from the health workers taught about cervical cancer at school and exposure to outreach clinics. The poor turnout for the program has put 13.1 million women in Uganda at risk of cervical cancer. Current estimates show that every year 6959 women are diagnosed with cervical cancer and 4607 die from the disease in Uganda. This has placed Uganda among the top five countries in Africa with the highest incidence of cervical cancer with Tanzania and Malawi. Therefore, to prevent HPV infections the WHO recommends vaccinating girls aged 9-14 years, when most have not started sexual activity

The turn-up of females in the age bracket remains very low compared to the Ministry of Health target therefore this research is being done to point out the various factors that could be behind the low uptake of HPV vaccination of females.

General objectives.

To find out the factors contributing to low uptake of HPV vaccination among females aged (10- 12) years attending Adjumani General Hospital, Adjumani district.

Specific objectives.

- To determine the individual factors contributing to low uptake of HPV vaccination among females aged (10-12) years attending Adjumani General Hospital Adjumani District.
- To analyze the community factors contributing to low uptake of HPV vaccination among females aged between (10-12) years attending Adjumani general hospital, Adjumani district.
- To find out the health facility factors contributing to low uptake of HPV vaccination among females aged (10-12) years attending Adjumani General Hospital, Adjumani district.

METHODOLOGY.

Study design.

A cross-sectional study design was used based on time and a quantitative research approach was adopted. A cross-sectional study made it possible to compare many different variables simultaneously in pointing out the factors contributing to the low uptake of HPV vaccination of females aged between (10 and 12) years attending Adjumani General Hospital, Adjumani District.

Study area.

The research was conducted at Adjumani General Hospital in Adjumani district in the northern region of Uganda owned by the Uganda government and administered by the Uganda Ministry of Health. It is located 8 meters from Gulu highway in Adjumani town council, central 1 parish central ii village. The health services offered included the following; maternity, general OPD, Laboratory, dental, general medicine, major and minor surgeries, the facility had one wing for HIV/AIDS service. The hospital had an administrator, Medical superintendent, Medical officers, clinical officers, comprehensive nurses, enrolled nurses and midwives, nursing assistants, and other allied health personnel. The study was conducted from August 2023 to October 2023.

Study populations.

The study population consisted of all parents and guardians who are taking care of females in the age bracket (10-12) years. They provided factors contributing to the low uptake of HPV vaccination among females aged (10-12) years at Adjumani General Hospital.

Sample size determination.

The sample size was calculated using Burton's formula
S = 2(QR) O
S = required sample size.

Q = Number of days spent while collecting data (n=5).R = Maximum number of respondents per day (n=5).
O = Maximum time the interviewer spent on each participant (n=1 hour).

S = 2×5×5×1= 50 respondents. Therefore, a sample of 50 respondents was used.

Sample Technique.

Simple random sampling was used to select the 50 respondents from the ANC and pediatric ward of Adjumani Hospital. Each woman or parent was assigned a number that was placed in a box, from which a number was picked at random without replacement, such that each woman or parent shall have an equal chance of being selected to participate in the study.

Sampling procedure.

The researcher gave questionnaires to all respondents who attended ANC and were in the pediatric ward on the days of data collection. This was observed by asking the mothers and parents to randomly pick a piece of uniformly folded paper from an enclosed box that either contained the word YES or NO in it. Any mother who picked a paper with the word YES was then asked to participate in the study and this was continued until the required number of respondents (50) was reached.

Data collection method.

Self-administered questionnaires which are organized according to the research objectives were used to collect data in the study. This was because it is easy to administer, quick in collecting data, less expensive, and respondent-friendly.

Data collection tool.

A well-organized self-administered questionnaire with closed-ended questions prepared in the English language was used to collect data from the respondents with the aid of a research assistant this helped to obtain the data required from the respondents, especially the illiterate ones.

Data collection procedure.

The data collection was done by the researcher himself after having obtained a letter of introduction from the Principal Kampala School of Health Sciences, a copy was delivered to the district health officer (DHO), and another copy was taken to the administration of Adjumani General Hospital who granted the permission to carry the study. Consent forms were delivered to all the respondents and they were served with questionnaires, those who were not in a position to read and write were helped by explaining to them through translation, and their responses were recorded.

Study variables.

Independent variables.

The independent variables in this study were the factors contributing to the low uptake of HPV vaccination of females aged (10-12) years attending Adjumani General Hospital.

Dependent variables.

The dependent variables were the factors contributing to the low uptake of HPV vaccination of females aged (10-12) years attending Adjumani General Hospital

Quality control.

The questionnaires were formulated in the English language and were first presented to the research supervisor who examined them and assessed the relevance of the questions to the objectives of the study. After data collection, the researcher thoroughly edited the collected data to check for accuracy, completeness, and consistency thus minimizing the errors and ensuring that the data collected was valid, reliable, and relevant to the study.

Selection criterion.

Inclusion criteria.

The study included all parents and guardians who were taking care of females in the age of (10- 12) years and consented to participate in the study. Pediatric nurses who have consented and were present at the time of data collection working in Adjumani General Hospital.

Data management and storage.

The collected data was checked for completeness before leaving the respondents and the participants were requested to correct the mistakes and fill in the missing data. Questionnaires were coded for easy checking and also to prevent losses. And data was locked in cupboards and

laptops with passwords. This was to ensure confidentiality and data security. Training and supervision of research assistants were done to ensure the collection of quality data. The generated data was stored in both soft and hard copy for future use

Data analysis and presentation.

The data was first locked in a case to prevent unnecessary access and damage by other people except the research assistants. All data was first analyzed manually using pens and papers after which it was entered into the computer and presented in the form of graphs, tables, and pie charts. This way it helped to simplify conclusion making.

Ethical consideration.

The supervisor provided approval and then an introduction letter from the Principal Kampala School of Health Sciences was delivered to the district health officer (DHO), and another copy to the administration of Adjumani General Hospital who granted permission for the study. An informed consent was then achieved from the parents of the females in the age of (10-12) and the nurses. I ensured confidentially and privacy by not using the names of the respondents and never sharing the questionnaires to maintain a researcher-respondent relationship in the due course of the study.

FINDINGS.

Socio-demographic data.

Table 1 shows the demographic data of the respondents and the study population. N = 50

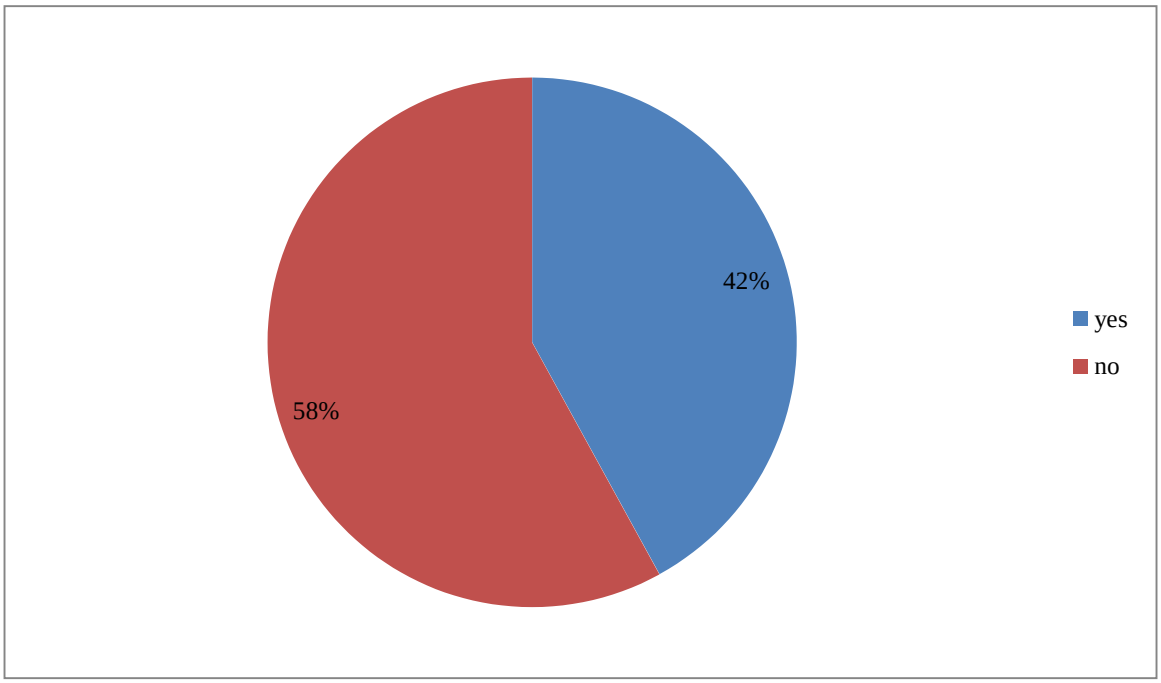
VARIABLES	FREQUENCY	PERCENTAGE (%)
AGE OF THE GIRL		
10	12	24
11	18	36
12	20	40
Total	50	100
RELATIONSHIP WITH THE GIRL		
Mother	20	40
Father	12	24
Uncle	6	12
Aunt	10	20
Others	2	4
Total	50	100
TRIBE		
Madi	22	44
Lugbara	16	32
Kuku	4	8
Others	8	16
Total	50	100
EDUCATIONAL LEVEL		
Primary	36	72
Secondary	4	8
Not in school	10	20
Total	50	100
RELIGION		
Catholic	18	36
Muslim	16	32
Protestant	6	12
Others	10	20
Total	50	100
OCCUPATION		
Employed	10	20
Unemployed	16	32
Peasant	24	48
Total	50	100

According to table 1,
The majority (40%) of the girls were of the age of 12 while the minority (24%)were of the age of 10.
Regarding the relationship with the girl, most (40%) of the

respondents were mothers while the least (4%) were protestant
Regarding the tribe, most (44%) of the girls were Madi whereas the least (4%) were Kuku.
The majority (72%) of the girls were in Primary while the minorities (8%) werein secondary.
Most (36%) of the respondents were Catholics whereas the least (12%) wereprotestants.
less than half (48%) of the respondents were peasants by occupation while(20%) were employed.

Individual factors contributing to low uptake of HPV vaccination among females aged10-12 years attending Adjumani General Hospital.

Figure 1 shows the distribution of respondents according to whether they have ever heard any information about the HPV vaccine. N=50



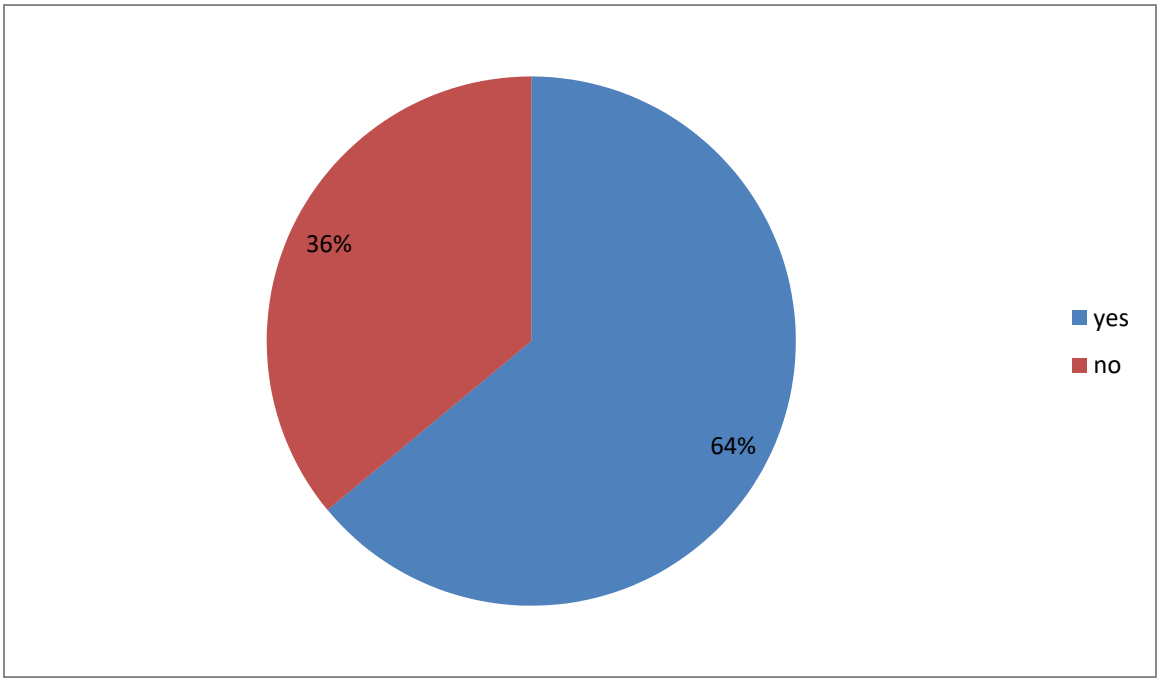
From Figure 1, more than half (58%) of the respondents agreed that they had never heardabout the HPV vaccination whereas the least (42%) of the respondents agreed otherwise.

Table 2: Shows the distribution of the respondents according to where they heard about the HPV vaccination from. N=21

VARIABLE	FREQUENCY	PERCENTAGE (%)
Radio	12	57.2
Health facility	6	28.5
Television	2	9.5
Internet	1	4.8
Total	21	100

From Table 2, the majority (57.2%) of the respondents said they heard about the HPVvaccination over Radio whereas the least (4.8%) of the respondents said they heard from the internet.

Figure 2: Show the distribution of respondents according to whether their daughters received the HPV vaccine. N=50



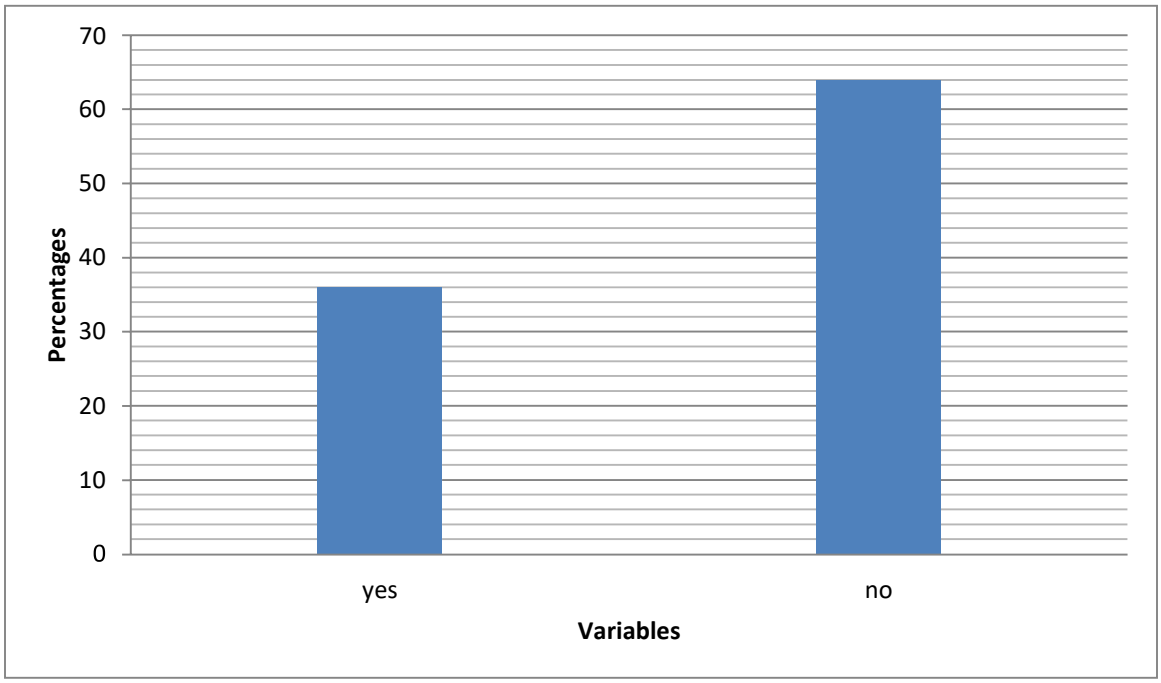
From Figure 2, the majority (64%) of the respondents agreed their daughter did not receive the HPV vaccine whereas a minority (36%) of the respondents agreed their daughter received the HPVvaccine.

Table 3: Shows the distribution of the respondents according to why their daughter did not receive the HPV vaccine. N=32

VARIABLE	FREQUENCY	PERCENTAGE (%)
I cannot afford the vaccine	18	56.2
The vaccine has terrible side effects	6	18.8
The vaccine results in other health problems	8	25
Total	32	100

From Table 3, more than half (56.2%) of the respondents said that they could not afford the vaccine whereas a minority (18.8%) of the respondents said that they feared the vaccine might have terrible side effects.

Figure 3: Shows the distribution of the respondents according to whether they believe their daughters need the HPV vaccine. N=50



From Figure 4, the majority (64%) of the respondents did not believe their daughters needed the vaccine whereas a minority (36%) of the respondents did believe their daughters needed the vaccine.

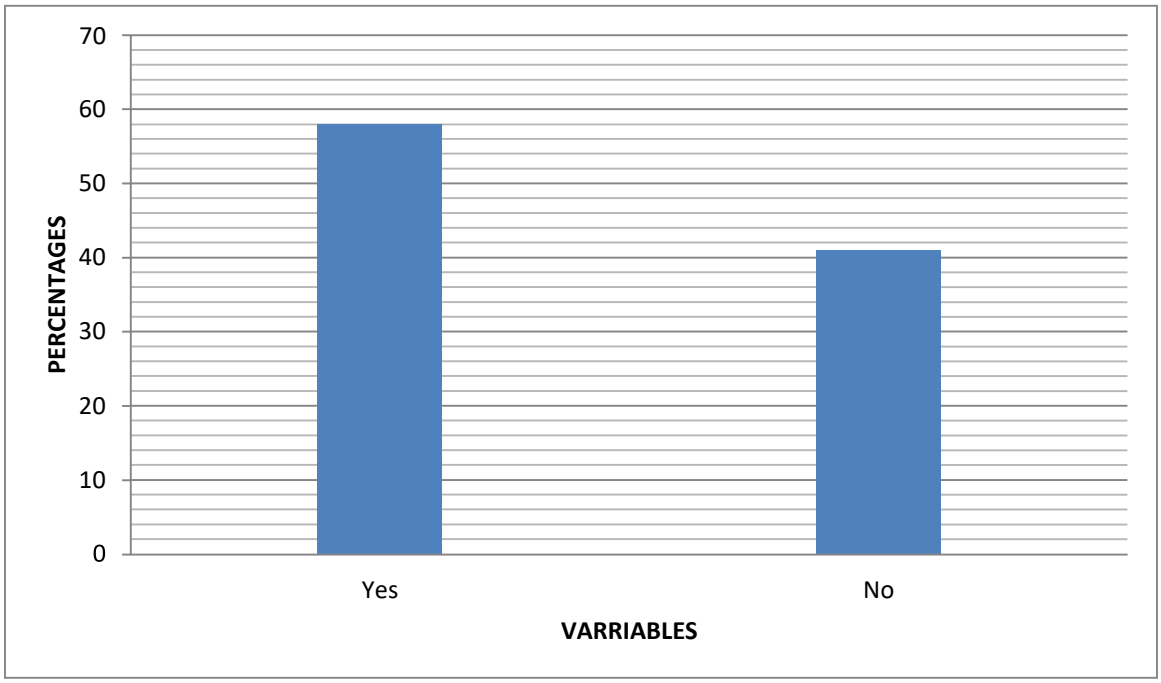
Table 4: Shows the distribution of the respondents according to why they believe their daughters don't need the HPV vaccine. N=32

VARIABLES	FREQUENCY	PERCENTAGES (%)
I don't consider my child at the risk of HPV infections	9	26.7
I don't consider HPV as a common infection	11	33.3
The vaccine is not necessary	7	23.4
It increases the juvenile sexual act of my child	5	16.6
Total	32	100

From Table 5, most (33.3%) of the respondents said that they don't consider HPV as a common infection whereas the least (16.6%) of the respondents said they fear the vaccine might increase the juvenile sexual acts of their child.

Community factors contributing to low uptake of HPV vaccination among females aged10-12 years attending Adjumani General Hospital.

Figure 4: Shows the distribution of respondents according to whether the HPV vaccination program has ever been extended to their community. N=50



From Figure 5, the majority (58%) of the respondents agreed the vaccination program had ever been extended to their community while the minority (42%) of the respondents denied that the vaccination program had never been extended to their community.

Table 5: Shows the distribution of the respondents according to what barriers made the vaccination program unsuccessful in their community. N=29

VARIABLES	FREQUENCY	PERCENTAGES (%)
The covid-19 pandemic	12	41.4
Language and cultural barriers	8	27.6
The cost of the vaccine was not affordable to every member.	9	31
Total	29	100

From Table 5, the majority (41.4%) of the respondents said the COVID-19 pandemic while the minority (27.6%) of the respondents said the language and cultural barriers made it unsuccessful.

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Table 6: Shows the distribution of the respondents according to what rumors they heard from their community about the HPV vaccine. N=50

VARIABLE	FREQUENCY	PERCENTAGE
I heard stories of people the vaccine killed	20	40
I heard stories of people who got disease the vaccine couldhave prevented	9	18
I heard of people who got along lasting side effects	11	22
I heard of people who the vaccine harmed severely	10	20
Total	50	100

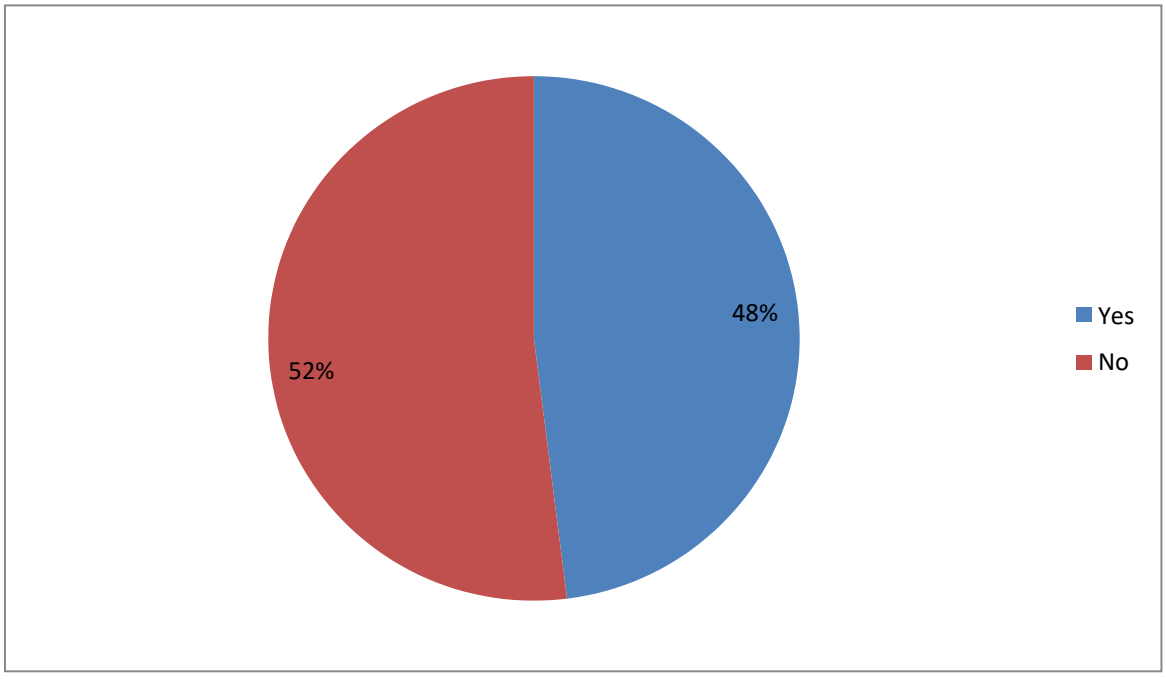
From Table 6, most (40%) of the respondents said they heard stories of people the vaccine killed whereas the least (18%) of the respondents said they heard stories of people who got diseases the vaccine could have prevented.

Table 7: Shows the distribution of the respondents according to what their leaders say about the HPV vaccination. N=50

VARIABLES	FREQUENCY	PERCENTAGE
The HPV vaccine will affect the girl's fertility	20	40
The vaccine is not safe	18	36
They recommended it	2	4
Others	10	20
Total	50	100

From Table 7, most (40%) of the respondents revealed that their leaders said the vaccine would affect the girl's fertility whereas the least (4%) of the respondents revealed that their leaders recommended the vaccine.

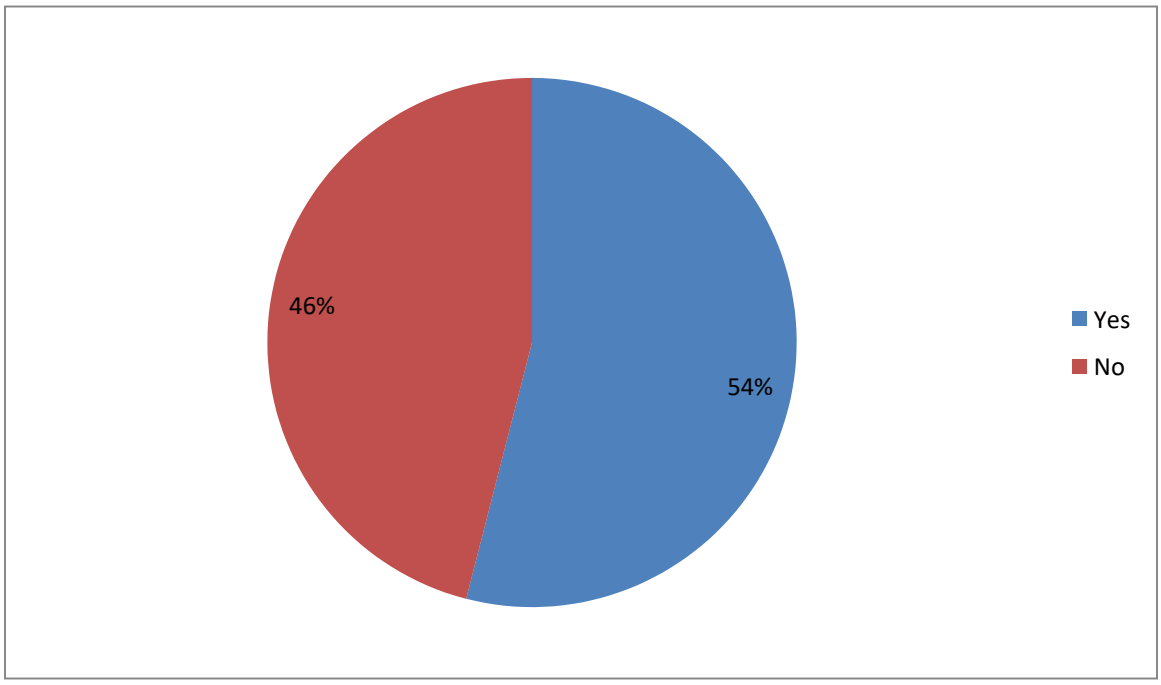
Figure 5: Shows the distribution of the respondents according to whether their community beliefs recommend the HPV vaccine. N=50



From Figure 5, the majority (52%) of the respondents revealed that their community beliefs don't recommend the HPV vaccine whereas the minority (48%) of the respondents accepted that their community beliefs recommend the vaccine.

Health facility factors contributing to low uptake of HPV vaccination among females aged 10-12 years attending Adjumani General Hospital.

Figure 6: Shows the distribution of the respondents according to whether they have ever taken their daughters to the hospital for HPV vaccination. N=50



From Figure 6, more than half (54%) of the respondents said they had ever taken their daughter to the hospital for the vaccination while a minority (46%) of the respondents said they had never taken their daughters to the facility for the vaccination.

Table 8: Shows the distribution of the respondents according to what happened when they reached the hospital. N=27

VARIABLES	FREQUENCY	PERCENTAGE (%)
The vaccine was not in stock	10	37
The fear of the test procedure before vaccination i.e. the pap smear	8	29.7
We did not get the vaccine	9	33.3
Total	27	100

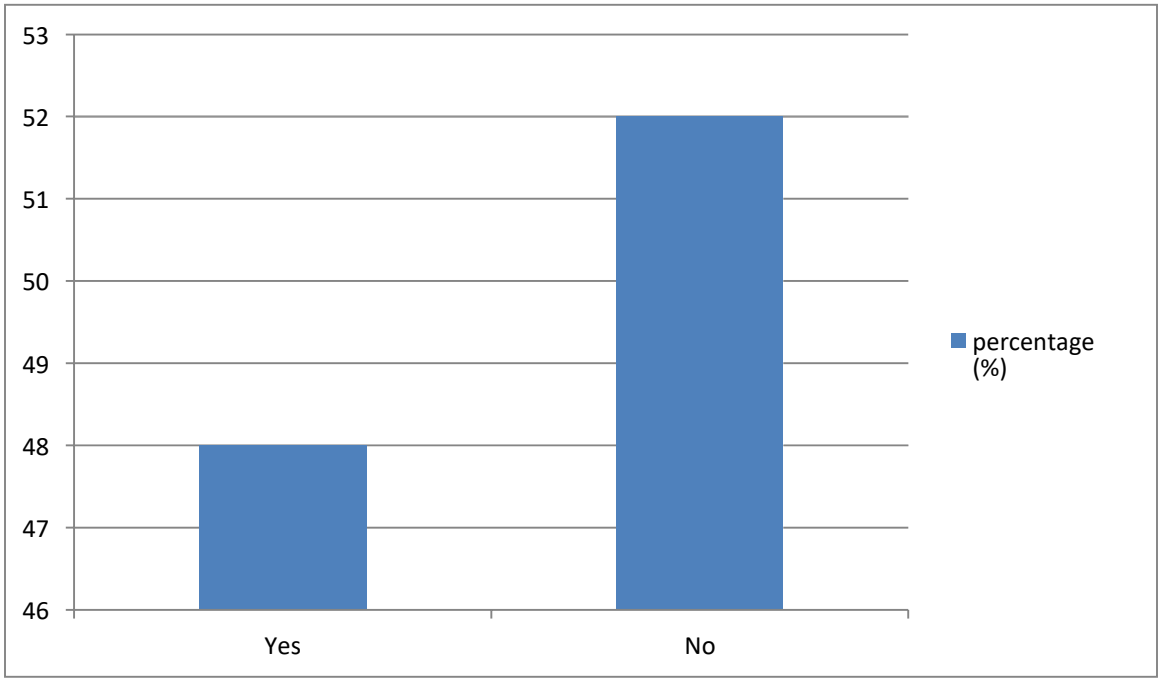
From Table 8, most (37%) of the respondents said the vaccine was not in stock while a minority (29.7%) of the respondents reported fear of the test procedure before the vaccination i.e.the Pap smear.

Table 9: Shows the distribution of the respondents according to why they had never taken their daughters to the hospital for the HPV vaccination. N=23

VARIABLES	FREQUENCY	PERCENTAGE (%)
We cannot access the hospital	12	52.2
Busy work schedules and time constraints	5	21.7
We don'tfeel comfortable discussing the vaccine with anurse	6	26.1
Total	23	100

From Table 9, more than half (52.2%) of the respondents said they cannot access the hospital (21.7%) of the respondents said they have busy work schedules and time constraints.

Figure 7: Shows the distribution of the respondents according to whether their daughters are screened for cervical cancer. N=50



From Figure 7, more than half (52%) of the respondents admitted their daughters were not screened for cervical cancer whereas less than half (48%) of the respondents admitted their daughters were screened for cervical cancer.

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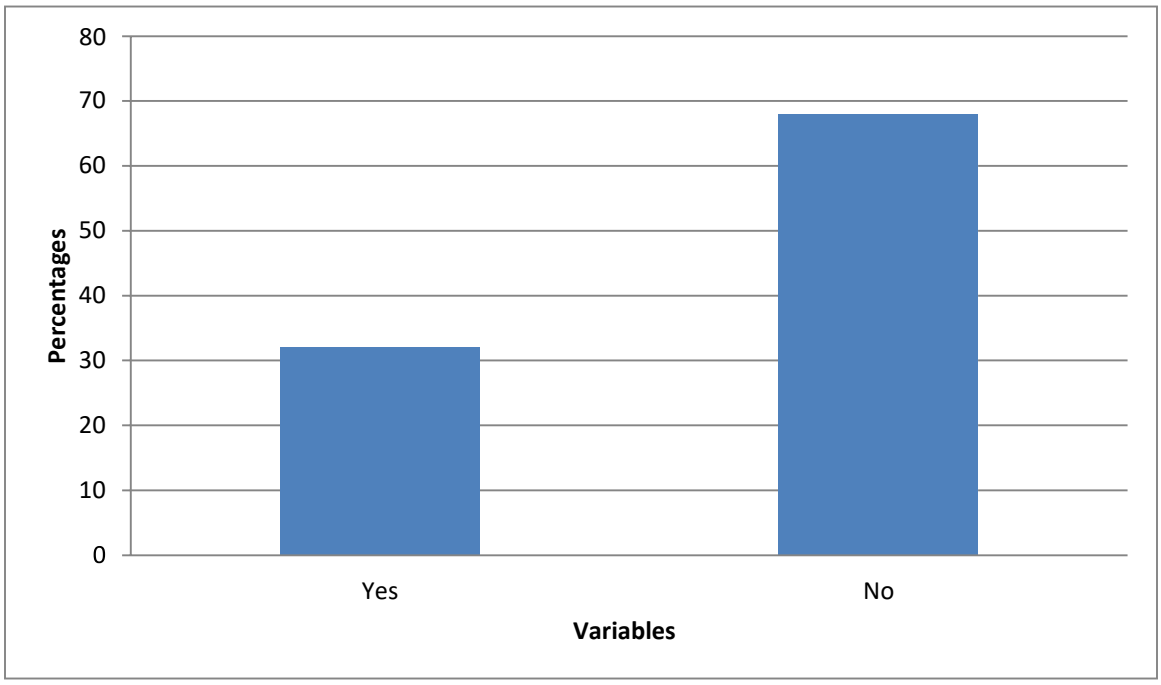
Table 10: Shows the distribution of respondents according to why their daughters were not screened for cervical cancer. N=26

VARIABLE	FREQUENCY	PERCENTAGE
Fear of Pap smear and the fear they might not get a good result	7	26.9
Embarrassment to undergo the screening procedure	8	30.8
I have concerns about the procedure and results due to a lack of information.	11	42.3
Total	26	100

From Table 10, most (42.3%) of the respondents said they still had concerns about the procedure and the results due to lack of information whereas the least (26.9%) of the respondents said they feared Pap smear and they feared they might not get good results.

Figure 8: Shows the distribution of the respondents according to whether their doctors recommended the HPV vaccine for their daughters. N=50



From Figure 8, the majority (68%) of the respondents agreed their doctor never recommended the vaccine for their daughter whereas a minority (32%) of the respondents agreed.

Table 11: Shows the distribution of the respondents according to why their doctors never recommended the HPV vaccine for their daughters. N=34

VARIABLES	FREQUENCY	PERCENTAGES
He said the guidelines regarding the vaccine are not clear	9	26.5
He said the vaccine is costly and maximizes medical bills	8	23.5
He said the vaccine supply is inconsistent	6	17.6
He said there is adequatetraining about the HPV vaccine	11	32.4
Total	34	100

From Table 11, most (32.4%) of the respondents revealed that their doctor said there was inadequate training about the HPV vaccine while the least (17.6%) of the respondents revealed that their doctor said the vaccine supply was inconsistent

DISCUSSION.

Individual factors contribute to the low uptake of HPV vaccination among females aged 10-12 years.

The current study findings reported that more than half (58%) of the respondents had not received any information about HPV vaccination. This implies that the people were not aware of the HPV vaccination. This finding is consistent with the study which was carried out by Adebola et al, (2023) about beliefs and knowledge related to the HPV vaccine among African Americans and African immigrants which showed that (80%) of the participants had not heard about the vaccine.

From the study findings, more than half (56.2%) of the respondents who agreed that their daughter did not get the vaccine could not afford the vaccine. This is attributed to the fact that most of the respondents were of a low socioeconomic status. This finding corresponds to cross- a sectional study carried out by (Lee et al, 2019) about factors influencing adolescent girls' decision to initiation for human papillomavirus vaccination in Hong Kong which showed that less than (48%) of the respondents did not get the vaccine due to its cost.

From the current study findings, the majority (64%) of the respondents did not believe their daughter needed the vaccine. This may be due to limited knowledge and poor attitudes towards HPV vaccination. This study finding is not in line with the results obtained from the study done by Melissa et al, (2017) which showed that (34%) of the respondents believed their child did not need the vaccine

In the current study findings, most (33.3%) of the respondents who never believed that their daughter needed the HPV vaccine didn't consider HPV as a common infection. This implies that there is a lack of awareness about the prevalence of HPV infections. This study finding does not correlate with the study done by Sallam et al, (2021) among universities which showed that (24.1%) of the respondents said they do not consider HPV as a common infection.

Community factors contributing to low uptake of HPV vaccination among females aged 10-12 years.

From this current study, most (40%) of the respondents reported having heard stories of people the vaccine harmed after receiving it including those the vaccine killed from the communities. This implies there are a lot of rumors circulating in the community. This finding correlates to a study done by Rebecca et al, (2019) which showed that (34%) of respondents said they heard stories of people who the HPV vaccine harmed after receiving it, including those the vaccine killed, long-lasting side effects, and temporary serious harm.

From this recent study, most (40%) respondents revealed that the community leaders said the vaccine would affect the fertility of the girls. This implies that there is misinformation about the HPV vaccine. This finding is inconsistent with the study done by Julie et al, (2023) in Zimbabwe which showed that (29%) of the community leaders reported that the vaccine would affect the girl's fertility.

From the current findings, more than half (52%) of the respondents revealed that their cultural beliefs could not recommend the HPV vaccination. This implies there could be a prevailing belief in the community that the HPV vaccine is unnecessary.

Health facility factors contributing to low uptake of HPV vaccination among females of 10-12 years.

From this recent study, most (37%) of the respondents who had ever taken their daughter to the hospital for the vaccination reported the vaccine wasn't in stock. This implies that there is inconsistency in the supply of the vaccine. This finding is in line with the study conducted by Marples et al, (2022) on the availability of the HPV vaccine in regional pharmacies which showed that more than half (55.6%) of the respondents reported the vaccine was not available in stock.

From this current study's findings, more than half (54%) of the respondents said they could not access the hospital, this is a major reason why they never took their daughters for the vaccination. This implies they might be residing in rural or remote areas which makes it hard to access the health facility. This finding corresponds with the study done by Williams et al, (2020) in the United States which showed that the highest percentage (82.2%) of the respondents living in rural areas missed vaccination opportunities because of the inaccessibility to the health center.

From the study, half (50%) of the respondents reported that their doctor said there was inadequate training about the HPV vaccine. This may be due to limited continuous medical education about the HPV vaccination. This finding does not correlate with the study done by Nabirye et al, (2020) on health system factors influencing the uptake of the HPV vaccine among adolescent girls in Mbale which showed that (14%) of the respondents reported doctors saying there was inadequate training on the HPV vaccine.

CONCLUSIONS.

The individual factors contributing to low uptake of HPV vaccination among females 10-12 years were, 58% reported unawareness about HPV vaccination, 56% reported unaffordability of the vaccine, 38% reported the vaccine is ineffective, 36% reported said they don't consider HPV as a common infection.

The study revealed that community factors contributing to low uptake of HPV vaccination of females 10-12 years were; 38% reported covid-19 pandemic, 40% reported rumors that the vaccine kills, and 36% reported community leaders' failure to recommend the vaccine,

Furthermore, the study findings also established that health facility factors contributing to low uptake of HPV vaccination among females of 10-12 years were; 38% reported vaccine wasn't in stock, 54% reported inaccessibility of the hospital, 38% reported concern about the Pap smear screening test and 42% reported inadequate training of the health workers about the vaccination.

RECOMMENDATIONS.

The MOH should ensure that the health workers receive enough training about HPV vaccination and also ensure a consistent supply of the vaccines to the respective health facilities to make it always available and enough for the clients who come for it.

The district health service provider should intensify effective health education of the communities about the HPV, and its vaccine and also clear rumors circulating in the minds of the people, paying attention to females aged 9-15 years making sure they are screened and vaccinated for HPV.

The hospital administration should make sure that the patients are given health talk about human papillomavirus and its vaccine; if possible, the health talk and the vaccination programs should sometimes be extended to the far communities who cannot easily make it to the hospital for such events.

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LIST OF ABBREVIATIONS AND ACRONYMS.

9vHPV: 9-valent HPV vaccine (Gardasil).
ACOG: American College of Obstetricians and Gynecologists.
AIDS: Acquired immunodeficiency syndrome.
ANC: Antenatal care.
CIN: Cervical intraepithelial neoplastic
HIV: Human immunodeficiency virus.
HPV: Human Papillomavirus.
ICC: Invasive cervical cancer.
ICO: Information Centre on HPV and cancer
MOH: Ministry of Health.
OPD: Outpatient department.
SCC: Squamous cell carcinoma.
STI: Sexually transmitted disease.
UAHEB: Uganda allied examination board
VIA: Visual inspection with acetic acid.
WHO: World Health Organization
DHO: District Health Officer

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