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Knowledge, attitude, and utilization of human papillomavirus vaccination among female undergraduates in Ekiti State, Nigeria

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Oluwaseyi A. Akpor[1], Adewale T. Adeyiolu[2], Modupe I. Alade[1], Senami Adebiyi[1], Richard S. Adeola[1] and Benedict T. Adeyanju[2]*

Faculty of Nursing Sciences, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria[1]; Department of Obstetrics and Gynaecology, Afe Babalola University Multisystem Hospital, Ado-Ekiti, Ekiti State, Nigeria[2]

***For Correspondence:** Email: *akporoa@abuad.edu.ng*; Phone: +2347068531599

Abstract

Despite the introduction of the Human Papillomavirus (HPV) vaccine in Nigeria in 2009, vaccination rate is still low and the disease-related mortality remains high. This study evaluated the knowledge, attitude, and utilization of HPV vaccinations among female undergraduates in a university in Ekiti State, southwest Nigeria. This was an observational study that utilized a standardized questionnaire to obtain information from 200 female participants who were selected using multistage sampling technique. The data was analyzed and presented with descriptive statistics, while Chi- square was used to test any significance in observed differences and relationships between variables. About 53.3% of the respondents had fair knowledge of HPV. Results on utilization were extremely low as only 5.4% had received the vaccination in all three doses. The major barriers to HPV utilization were inadequate awareness about the vaccine (53.0%), concern about its cost and safety (41.1% and 40.1% respectively). We conclude that HPV vaccination campaign should be extensively encouraged especially among university students. The cost of the vaccine should be subsidised to encourage its uptake, thereby reducing cervical cancer incidence and deaths in the country. *(Afr J Reprod Health 2023; 27[6s]: 79-89).*

Keywords: Mortality, cancer, women, vaccine

Résumé

Malgré l'introduction du vaccin contre le virus du papillome humain (VPH) au Nigeria en 2009, le taux de vaccination est encore faible et la mortalité liée à la maladie reste élevée. Cette étude a évalué les connaissances, l'attitude et l'utilisation des vaccins contre le VPH chez les étudiantes de premier cycle d'une université de l'État d'Ekiti, dans le sud-ouest du Nigéria. Il s'agissait d'une étude observationnelle qui utilisait un questionnaire standardisé pour obtenir des informations auprès de 200 participantes sélectionnées à l'aide d'une technique d'échantillonnage à plusieurs degrés. Les données ont été analysées et présentées avec des statistiques descriptives, tandis que le chi carré a été utilisé pour tester toute signification dans les différences observées et les relations entre les variables. Environ 53,3 % des répondants avaient une bonne connaissance du VPH. Les résultats sur l'utilisation étaient extrêmement faibles puisque seulement 5,4 % avaient reçu le vaccin aux trois doses. Les principaux obstacles à l'utilisation du VPH étaient une connaissance insuffisante du vaccin (53,0 %), des préoccupations concernant son coût et son innocuité (41,1 % et 40,1 % respectivement). Nous concluons que la campagne de vaccination contre le VPH devrait être largement encouragée, en particulier chez les étudiants universitaires. Le coût du vaccin devrait être subventionné pour encourager son adoption, réduisant ainsi l'incidence du cancer du col de l'utérus et les décès dans le pays. *(Afr J Reprod Health 2023; 27[6s]: 79-89).*

Mots-clés: Mortalité, cancer, femmes, vaccin

Introduction

Human Papillomavirus (HPV) is one of the most common sexual transmitted illnesses, with about 43 million HPV infections in occurring worldwide in 2018, many of which were among teenagers and young adults in their early 20s[1]. Human Papillomavirus infection is responsible for nearly all cervical cancers and top-grade dysplasia, as well as around 90% of anal, 70% of vaginal, 50% of penile, 40% of vulvar, and 13%–72% of oropharyngeal cancers[2]. It is a sexually transmitted virus, that is mostly transmitted through genital contact but can also be transferred through skin-to-skin contact[3]. Worldwide, HPV infection has been linked to more than 99% of cervical cancer cases[4].

Cervical cancer is the dominant disease caused by HPV, with 270,000 fatalities per year, making it the fourth most common cancer in women (7.5% of all female cancer deaths). According to current statistics, over 85 percent of cervical cancer deaths in women occur in low income[5]. Globally, cervical cancer is the fourth most prevalent disease in women with a projected 604, 000 new cases and 342,000 deaths in 2020 with about 90% cases and deaths occurring in low and middle income countries[6].

As reported in a recent study, three vaccines have been developed against HPV. These include Gardasil (for young ladies and young men age 9–26 years), Gardasil 9 (for young ladies age 9–26 years and young men age 9–15 years), and Cervarix (for young ladies age 9–25 years)[7]. Each of the mentioned immunizations can safeguard against HPV strains 16 and 18, which can cause more than 70% of cervical cancer cases[1]. The vaccines give little advantage to women that are already infected with HPV types 16 and 18; hence, the vaccines are recommended essentially for women who have not been exposed to HPV and are normally given in two doses separated by at least 6 months, for teenagers aged 11 to 12 and three doses for older persons[1]. Cervical cancer is a serious public health issue worldwide and in Sub-Saharan Africa, it is the most frequent gynecological cancer among women[10,9]. Annually, 70,722 new cases of invasive cervical cancer are projected to emerge in Sub-Saharan Africa[9]. Cervical cancer is caused by a long-term infection with HR-HPV[3].

In Nigeria, cervical cancer has a reported incidence rate of 25/100,000 instances per year, which equates to a disease burden of roughly 8000 cases per year for an estimated 32 million women in 2005. Cervical cancer is also said to be the second most common cancer among Nigerian women[11]. About 14,089 cases of cervical cancer are detected in Nigeria each year, with 8240 deaths[12-13]. In Nigeria's Federal Capital City, Abuja, a significant prevalence of cervical cancer has been documented[14]. It is estimated in Nigeria that 23.7 percent of women have cervical HPV infection at any one time. Hence, HPV vaccine is therefore a cost-effective strategy to prevent cervical cancer[6,15]. In Nigeria, two types of HPV vaccines (Gardasil and Cervarix) were approved for use in 2009[9]. Despite the high prevalence of HPV infection and cervical cancer in Nigeria, the use of the HPV vaccination remains low[16-17]. In a study conducted in Ibadan among young women, minimal knowledge of HPV infection and vaccination against the infection was noted, with respondents identifying the high cost of the vaccine as a deterrent to its use[18].

Awareness and knowledge of HPV, the risk factors and vaccination are strongly associated with both vaccine uptake and the adoption of health protective behaviours[19]. Many studies conducted in Nigeria among female students in both secondary schools and tertiary institutions have reported poor knowledge of HPV as the causative agent of cervical and HPV vaccination as a means of preventing cervical cancer as well as the uptake of the vaccines among these age groups. [20-22]. Similarly, studies conducted among parents and guidance of teenagers and young adults showed a corresponding poor knowledge of cervical cancer prevention and screening for their children[23-25]. In Ekiti State, several studies have been conducted on HPV such as genotyping of HPV in cervical cancer[26], knowledge and acceptability of HPV vaccine among women[27], and prevalence of anti-human papillomavirus IgG antibody among students[28]. Hence, the study investigates the knowledge, attitude, and utilization of HPV vaccine among female undergraduates of Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria.

Methods

Research design, setting and target population

The study was quantitative in nature with a descriptive research design that employed the use of a standardized adapted questionnaire to assess the knowledge, attitude and utilization of HPV vaccination programme among the female undergraduates. The research was carried out in a Afe Babalola University, Ado-Ekiti, Ekiti State, South West Nigeria. The target population for this study comprised of female undergraduates with an estimated population size of 3500. The population were chosen as no previous study was found to have investigated the knowledge, attitude and utilization

of HPV vaccination among the students. As earlier mentioned, many studies conducted in Nigeria among female students in both secondary schools and tertiary institutions have reported poor knowledge among their participants.

Sampling technique

The minimum sample size for the study was calculated using the Taro Yamane (Yamane, 1973) formula, which is

n=N/(1+N〖(e)〗^2)

Where:
n= sample size required/ sample size
N= number of people in the population/ population size
e= sampling error (0.07 acceptable error)
N= 3500

n= 3500/(1+3500(0.07)〗^2)

n=192
Adjustment for a 10% rate of non-responses and invalid responses yielded a final sample size of 202.

A multistage sampling technique was used to choose the participants from selected academic departments in the university. During the first stage; cluster random sampling was used to select four colleges (College of Law, College of Social Management and Sciences, and College of Medicine and Health Sciences). For the second stage; departments from each of the colleges were chosen using stratified random selection based on their population with the aid of a sample frame that was prepared by the researchers, from which 30 departments were selected. In the third stage, the research participants were chosen using a simple random sample procedure based on their levels (100-500).

Instrument for data collection

The items of the questionnaire were adapted directly from Odetola and Ekpo[18], Davis[19] and Chandrasekar[29], relevant adjustments were made to satisfy the study's aims. The demographic data of the participants were included in the questionnaire's items (Section A); questions selected to test the knowledge level and attitude of HPV/HPV vaccines, using a mix of multiple choice and 'yes and no' questions (Section B and C) had 18 (nine each) questions such as the meaning of HPV, what it causes, the risk factors, is it preventable, knowledge of the vaccination; types, applicable age, where and who to get it, number of doses and its safety. For measurement of concept, responses for all questions were graded 0, 1 or 2. Correct response was given 1-2 marks, total scores were grouped into three categories. Scores less than 40% were classified as poor knowledge, above 50% but less than 70% were fair knowledge while 70% and above were classified as good knowledge. Different domains of knowledge and attitude are shown in Table 4 and 8. Also, closed ended questions was used to determine the level of utilization of HPV vaccination among respondents (Section D).

Validity and reliability

For validity, the study made use of both face and content validity. Following a thorough examination of the literature, the questionnaire was modified to include and accurately measure key factors in the research. Before the actual study, pre-testing of the questionnaire was carried out and the results were incorporated into the final questionnaire.

The test-retest approach was used to determine the reliability. Also, to assess for reliability five copies of the questionnaire were given to research participants that filled the questionnaire previously, approximately two weeks apart, under same conditions as the former to compare with the previous answers they gave and the reliability coefficient was calculated as 0.50, 0.75, 0.93 and 0.70, thus using the attribute of stability to ensure instrument reliability.

Data analysis

For this study, the data were analyzed using SPSS (version 23) software for windows. Frequencies, percentages, and means were used to produce descriptive statistics. For observed differences and relationships between research variables, percentages were compared between groups using Chi-square including those identified in the hypothesis and thus the hypotheses were tested.

A p-value of less than 0.05 was considered significant. Tables, frequency charts, and

percentages were used to assess the data, which was then interpreted and conclusions were formed as appropriate.

Ethical consideration

The Research and Ethics Committee of Afe Babalola University, Ado-Ekiti granted ethical permission with protocol number AB/EC/18/09/191 prior to the commencement of the study. During administration of questionnaires, participants' rights to full disclosure and Informed consent was explained as participants were notified about the nature of the study and the findings that needed to be gathered. To ensure self-determination, participants were told that they had the right to choose whether or not to engage in the research on a voluntary basis, and their views were honored.

Respondents' names were not required in the questionnaire or any other kind of identification in order to maintain discretion and anonymity, preserving the respondents' privacy. This study did not cause any form of harm to the participants, be it physical, emotional, social or financial harm or exploitation ensuring non maleficence, the respondents were selected based on the research requirements and without any discrimination to ensure justice. Also, they were assured that the study would not be more intrusive than it should be.

Results

Socio-demographic characteristic of respondents

A total of 200 respondents took part in the survey. Participants ranged in age from 17 – 25 years old. Half of the respondents (50.0%) were within 17-20 years of age. Higher percentages of the respondents were Christians (74.2%) and 52 .5% of the respondents were of Yoruba ethnicity. Data also showed that half (50.3%) of the respondents were from the College of Medicine and Health Sciences with 29.5% in 500 level (Table 1).

Table 1: Sociodemographic characteristics of respondents (N= 200)

Socio-demographic data		Frequency	%
Age distribution	17-20	91	50.0
	21-24	84	46.2
	25 and above	7	3.8
Religion	Christianity	135	74.2
	Islam	35	19.2
	Others	12	6.6
Ethnicity	Yoruba	95	52.5
	Hausa	16	8.8
	Igbo	41	22.7
	Others	29	16.0
College	Medicine and Health Sciences	92	50.3
	Sciences	31	16.9
	Social and Management Sciences	30	16.4
	Law	30	16.4
Study level	100	28	16.2
	200	24	13.1
	300	30	16.4
	400	47	25.7
	500	54	29.5

Knowledge of HPV and HPV vaccination

The majority (73.4%) of the respondents knew what the acronym 'HPV' stood for, while 80.1% of them indicated that HPV is preventable. A total of 30.6% of the respondents indicated they have never heard of HPV with 21.5% of them responding they do not know what the presence of HPV can cause. Generally, 43% of the respondents indicated smoking, early intercourse and protected sex as risk factors for HPV (Table 2). The majority of the of the respondents (90.7%) agreed that HPV vaccines are safe while 92.3% supported that the vaccines offered protection against diseases while 7.1% of the participants are of the opinion that only males should get the vaccine (Table 3). The study showed a significant relationship ($p = 0.013$) between college of the respondents and knowledge of HPV vaccination (Table 4).

Attitude towards HPV vaccination

Generally, over 70% of the respondents indicated they will be willing to know more about HPV vaccination and will vaccinate themselves against HPV, 85.5% will allow themselves and their relatives to get HVP vaccination while 20.1% indicated that vaccine- related activities are a waste of time and 42.2% think that the cost of vaccination is too expensive (Table 5).

Table 2: Knowledge of HPV by the respondents (N=200)

Questions		Frequency	(%)
What Does HPV mean?	Hidden Parasite Vermin	8	4.3
	Human Parasite Virus	7	3.8
	High Plasmodium Vivax	7	3.8
	Human Papilloma Virus	135	73.4
	I Don't Know	27	14.7
HPV	Is a STD	48	26.1
	Causes cervical cancer	77	41.8
	Causes genital wart	32	17.4
	Is a type of fever	7	3.8
	I don't know	38	20.7
What does HPV causes	Measles	4	2.2
	Cervical cancer and genital warts	124	68.5
	Hepatitis	7	3.9
	No Response	7	3.9
	I don't know	39	21.5
Risk factors include	Smoking	21	12.8
	Early intercourse	26	15.9
	Unprotected sexual intercourse	46	28.0
	All of the Above	71	43.0
HPV is	An infection	16	8.9
	A virus	133	73.9
	I don't know	31	17.2
HPV is preventable	True	145	80.1
	False	36	19.9
Have you ever heard of HPV	Yes	127	69.4
	No	56	30.6

Table 3: Knowledge of HPV vaccines and vaccination (N=200)

Questions		Frequency	%
At what age should you get the vaccine	0-9 years	25	13.9
	10-20 years	79	43.9
	21-23 years	47	26.1
	24 years and above	29	16.1
Who can get the vaccine	Male	13	7.1
	Female	71	38.8
	Both	99	54.1
How many doses of the vaccine should you get	1	31	17.3
	2	35	19.6
	3	90	50.3
	4	23	12.8
What do the vaccines do	Prevention of HPV	136	73.9
	Treatment of HPV	14	7.6
	I don't know	34	18.5
Vaccines offer protection against diseases		169	92.3
Have you ever heard of Gardasil or Cervarix		54	29.3
HPV vaccine is only for adults		90	50.3
Only sexually active people should get the vaccine		77	42.8
HPV vaccine is safe		165	90.7

Utilization of HPV vaccination

In terms of utilization, only 18.5% of respondents indicated they had ever been vaccinated against HPV. In general, 5.4%of the respondents indicated they had received all three doses of the vaccine, 10.9% had received one to two doses of the vaccine and will complete the injection course while 2.7% had received one to two doses of the vaccine but do not intend to complete the course of injections

Table 4: Cross tabulation of college of students against knowledge levels

College of respondents		Knowledge of HPV vaccine			Total	P value
		Poor	Fair	Good		
Medical and Health Sciences Sciences	Count	4	46	42	92	0.013
	% within college	4.3%	50.0%	45.7%	100.0%	
	Count	3	19	9	31	
	% within college	9.7%	61.3%	29.0%	100.0%	
Social and Management Sciences	Count	2	20	8	30	
	% within college	6.7%	66.7%	26.7%	100.0%	
Law	Count	8	12	10	30	
	% within college	26.7%	40.0%	33.3%	100.0%	
Total	Count	17	97	69	183	
	% within college	9.3%	53.0%	37.7%	100.0%	

Table 5: Attitudes towards HPV vaccination (N=200)

Questions	Frequency	%
I would like to know more about HPV Vaccination	147	79.9
Vaccine- related activities are a waste of time	37	20.1
Would you vaccinate yourself against HPV	147	79.9
Would you allow your friends or your relatives to get the vaccine	157	85.5
Do you think your parents or your relatives would approve of your vaccination against HPV	142	77.2
The vaccine is too expensive	78	42.2
Are you willing to pay to receive the HPV Vaccine	129	70.1
I feel I do not need the vaccine	66	35.9

Table 6: Utilization of HPV vaccination (N=200)

Questions		Frequency	(%)
Have you been vaccinated against HPV		34	18.5
I plan to get the HPV Vaccine		114	62.0
If NO why?	Personal Reasons	14	7.6
	I feel I am not at risk	21	11.4
	I am too busy	13	7.1
	I hate needles	9	4.9
	Others/can't specify	17	9.2
I have had all 3 doses of the vaccine		10	5.4
I have had 1 or 2 doses of the vaccine and will finish the series of shots		20	10.9
I have just had 1 or 2 doses of the vaccine and will not finish the course		5	2.7
The HPV Vaccine has been made available to me but I have not received it yet		26	14.1
The HPV vaccine was provided to me, but I declined.		17	9.2
The vaccination has not been provided to me.		96	52.2
If the vaccine were free, would you take it?		138	75.0
Do you intend on getting vaccinated?		126	68.5
If yes, when?	After filling the questionnaire	10	5.4
	Soon	44	23.9
	Next month	3	1.6
	Next year	18	9.8
	Before I get married	16	8.7
	Unsure	38	20.7
If no, why?	I don't need the vaccine	18	9.8
	I have collected all three doses	4	2.2
	I am too busy	16	8.7
	Others/can't specify	16	8.7

Table 7: Barriers to utilization of HPV vaccination (N=200)

Questions		Frequency	%
I am afraid of complications following vaccination		63	34.2
I am worried that the vaccine won't work		55	30.4
I feel I have taken too many vaccines already		46	25.7
I have not received all the information required about this vaccination programme		121	67.6
I am not aware of the vaccination programme		96	53.0
I feel the vaccine would cost too much		74	40.0
I am worried about the vaccine's side effect		73	40.1
I don't think my parents would allow me to receive the vaccine		44	24.6
I do not know what cervical cancer or HPV is		49	26.9
I cannot take the vaccine because (OTHERS, please specify)	Not at Risk	6	3.2
	Lack of resources	4	2.17
	Inadequate information	5	2.72
	Others/Phobia	6	3.2

Table 8: Cross tabulation of knowledge of students on HPV vaccination against attitudes towards HPV vaccination

Respondents' knowledge		Attitude towards HPV vaccine			Total	P value
		Poor	Fair	Good		
Poor knowledge	Count	1	6	9	16	0.001
	% within college	6.2%	37.5%	56.2%	100.0%	
Fair knowledge	Count	15	29	53	97	
	% within college	15.5%	29.9%	54.6%	100.0%	
Good knowledge	Count	0	12	57	69	
	% within college	0.0%	17.4%	82.6%	100.0%	
Total	Count	16	47	119	182	
	% within college	8.8%	25.8%	65.4%	100.0%	

(Table 6). Some of the barriers to the utilization of HPV vaccination, as indicated by the respondents were inadequate information and lack of awareness of the vaccination program while 34.2% indicated that they are afraid of complications following vaccination (Table 7).

The study also revealed a significant relationship (p= 0.001) between respondents' knowledge on HPV vaccination and attitudes towards HPV vaccination (Table 8).

Discussion

According to the findings of this study, the majority of respondents had the basic understanding of HPV and HPV vaccination. This data correlates with studies previously conducted among participants of same age groups comparable to this research, where the majority of participants had a modest level of understanding[30]. However, the findings were the opposite of a similar study conducted by researchers in Saudi Arabia[31] where only 20.5% of the respondents were well informed about HPV. This contrasting finding may be due to the fact that data from their study were collected from patients who visited the Primary Health Care Center and from the general public of A Qunfidah city of Saudi Arabia while participants in the current study were undergraduates.

A large percentage of participants however indicated smoking, early sexual intercourse and unprotected sex as risk factors for HPV which is similar to a previous finding[18] where a higher percentage of participants also identified smoking, early intercourse and unprotected intercourse as risk factors for the HPV infection. With regards to what HPV can cause, majority of the participants identified that HPV is the virus that causes cervical cancer and genital warts. Despite the fact that knowledge is not a direct determinant of health behavior, it is an essential component of any health intervention's effectiveness[32]. Hence, having a high degree of knowledge is linked to vaccination uptake[33]. Expanding information about HPV as well as its vaccination is an important and a potential way to increase vaccination rates and health awareness as knowledge is the key to healthy

living[18,32]. Also, understanding the cancer burden brought about by HPV assists with further developing HPV antibody and HPV- based cervical screening programs[31]. In fact, many theories of health behavior affirm the significance of awareness and knowledge (sometimes referred to as information) as a fundamental antecedent to health-protective behavior[33].

These equivalent standards apply in the dynamic course of those considering HPV immunization for them and past examinations have shown a connection between HPV information levels and antibody take-up[19]. Nonetheless, precise, straightforward data about HPV, cervical cancer and vaccinations from regarded sources can recognize truth from myth, rumors and minimal possible stigma about inoculation[34]. This aligns with the findings of this study as participants did not only possess an acceptable knowledge of the HPV vaccine but also showed the need to accept the vaccine at some designated point in future hence, an appropriate level of knowledge about HPV and its vaccination is effective in increasing utilization rates. The major barriers to utilization of the HPV vaccination programs, as indicated by the respondents were lack of awareness of the vaccination program, worrying about vaccine's side effect and the high cost of the vaccine. These observations were in concurrence with the discoveries of earlier investigators[29,35-36].

According to various studies carried out among doctors and nurses, the most critical perspectives while considering the HPV immunization were adequacy and complexity of the vaccine[31]. A previous study[36] emphasized that problems to HPV immunization are multi factorial and the outcome of inoculation programs appears to be profoundly subject to the help and recommendations of public health authorities and medical care experts. Indeed, whenever research participants and medical care suppliers are asked some information about the low HPV immunization rates, certain barriers were recognized, like, restricted knowledge about HPV and HPV-related sicknesses, being ignorant about the vaccination routine or overlooking the requirement for extra doses, safety worries about the antibody, concern about cost of the vaccination to the patient[37-38]. Previous report suggested factors influencing the completion of HPV vaccine to involve inadequate reminder techniques for the last dosage, poor monitoring systems for identifying people who skip their doses, weakening social mobilization efforts over time, and insufficient refresher training for vaccine providers prior to the second round of vaccine[39].

The cost of the HPV vaccine has been one of the most studied potential obstacles, with studies showing that cost impacts vaccination intentions[40]. According to a study conducted in Japan, cost was an issue, with just 42% of girls and women aged 13 to 26 from their study believed they could manage to get vaccinated[41]. Outstandingly, these findings were in agreement with this research study, as a considerable amount of study participants admitted that the cost of the vaccination was a substantial barrier to vaccine adoption. Understanding the cost components of vaccine distribution systems, as well as their effectiveness, will aid in identifying areas where changes may be made to encourage a wider reach[42]. Vaccination is not simply cost burdensome[31], fear of needles or the discomfort of injections have also been mentioned as obstacles[40,42]. It was observed in a similar study that the great majority of their adult sample (aged 27-55) stated that there were huddles to HPV vaccination adoption, including cost, fear of adverse effects, and inconveniences[43]. A similar study also discovered that fear of adverse effects is also a deterrent[44]. As the preceding study shows, a range of psychological and practical factors might influence HPV vaccination intentions and uptake[40]. This is also in agreement with the findings of this study as fear of side effects was highlighted as a major factor affecting the vaccination uptake among study participants.

Conclusion and recommendation

Significant findings from the study have been emphasized in knowledge, attitudes and utilization of HPV vaccination among female undergraduates in the study setting. Only a handful of the participants in the study showed intermediate awareness and a favourable attitude regarding HPV vaccination although only few had completed the three vaccination doses. However, majority of the respondents indicated willingness to have the

vaccine at certain points in their lives. Policy makers, healthcare professionals especially nurses and midwives with other concerned agencies should ensure the provision of programs creating necessary awareness about cervical cancer, HPV and its vaccination among undergraduates and the general populace. Also, vaccines against HPV should be readily available and administered within the prescribed timeframes and if possible, the price should be subsidized by appropriate authorities to encourage its utilization.

Nurses and other healthcare personnel have been identified as the key source of both information and advice on HPV infection, vaccination and testing. Although findings have shown an increase in knowledge of HPV but the uptake of its vaccination is still low. Hence, it is vital that policy that will improve public awareness and education especially among tertiary health institutions need to be formulated, as proper awareness and education are the key concepts in vaccination success.

Limitation of the study

The use of a smaller sample may serve as a limitation, also the study was contextual thus, the findings may not be generalised to other areas.

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Contribution of authors

OAA: Conceived and design the study, collected and analyzed the data. ATA: Assist in literature search, data interpretation and drafting of the manuscript. MIA: Interpreted the data and wrote the first draft of the manuscript. SA: Assisted in data collection, analysis and manuscript preparation. RSA: Assisted in data analysis and interpretation, was also involved in the preparation of the manuscript. BTA: Assisted with literature search and data interpretation.

Conflict of interest

There are no conflicts of interest declared by the authors.

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