

PREDICTORS AND ACCEPTABILITY OF HUMAN PAPILLOMA VIRUS VACCINE UPTAKE AMONG SENIOR SECONDARY SCHOOL STUDENTS IN ILE-IFE

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Abstract: Introduction: Cervical cancer is the second most common cancer in women worldwide and in Nigeria. Human papilloma virus (HPV), has been implicated as the causative agent of cervical cancer. The fact that HPV vaccination can prevent the occurrence of this deadly cancer is well established. Though the vaccine has been licensed in Nigeria since 2009 with widespread availability, it is yet to be included in National immunization program in Nigeria. This study aimed to assess the predictors and acceptability of the HPV vaccine among senior secondary girls in Ile-Ife.

Methods: This descriptive cross-sectional study recruited 400 students randomly selected from various secondary schools in Ife central-local government. The data was collected with the use of a pre-tested interviewer-administered questionnaire on knowledge, attitude, and acceptability of cervical cancer, HPV and HPV vaccine. Data were analyzed using descriptive and inferential statistics.

Results: Most respondents (93.2%) had poor knowledge of cervical cancer, HPV and HPV vaccine. Attitude towards cervical cancer and HPV vaccine was good and the majority (74.5%) had high acceptability for the HPV vaccine. Only 2.8% of the respondents have been vaccinated. Predictors of acceptability of HPV vaccine were younger age group ((AOR) 4.05, CI = 2.30-5.45), good knowledge ((AOR) = 2.50, CI = 2.31-6.83), mother's higher level of education (AOR = 1.55, CI = 2.62- 4.58), perceived fatality of cervical cancer (AOR = 4.13, CI = 1.49 – 4.19) and perceived efficacy of the HPV vaccine (AOR = 1.57, CI = 0.49 – 3.18).

Conclusions: The knowledge of secondary school girls in the study area on cervical cancer, HPV and

HPV vaccine is poor though the HPV vaccine acceptability is high. The high acceptability of the vaccine in this study is a reflection of the willingness of this vulnerable group to learn more about the subject matter. There is the need to create school health programs that will focus on health educating the students on this preventable cancer and the available vaccine. Including HPV vaccine into National immunization program in Nigeria may also improve awareness of cervical cancer and the vaccine uptake.

Key words: Knowledge, acceptability, HPV vaccine, senior secondary school.

INTRODUCTION

Cervical cancer is the second most common cancer in women worldwide and in Nigeria. Most cervical cancer is caused by the human papilloma virus (HPV), a sexually transmitted infection, for which a vaccine is now available. About 47.72 million Nigerian women are at risk of cervical cancer and the crude incidence per 100,000 population is 17.1 while the age-standardized incidence per 100,000 population is 29.0 (1). Nigeria has a cervical cancer mortality rate of 22.9 deaths per 100,000 (1). About 50–80% of sexually active women are exposed to at least one HPV type during their lifetime (2, 3). Women are usually infected with HPV in their teens to the early 30s and cervical cancer is a rare complication of the STI which is common (3). The peak incidence of HPV infection occurs in most populations within 5–10 years of the first sexual experience and the highest prevalence rates are seen in women aged 20–24 years (4, 5). The key to reducing cervical

cancer morbidity and mortality is early detection and treatment of cervical precancerous lesions. Screening for cervical cancer is very important in order to detect a pre-clinical phase or early stages of a disease for the purpose of identifying those likely or unlikely to have a disease. It also improves the prognosis for treated cases, reduces morbidity after treatment of screen detected cases, reassured those with negative tests and also is cost-effective in terms of use of health care resources. Health promoting measures against cancer have led to the development of a vaccine against HPV, which is currently available and has been demonstrated to be safe and clinically effective (6, 7). Two HPV vaccine types are available for the prevention of HPV-related diseases: Gardasil and Cervarix. The quadrivalent vaccine (Gardasil) targets HPV types 6, 11, 16 and 18, and is 98% effective while the bivalent vaccine (Cervarix) targets HPV types 16 and 18 and is 92% effective (8, 9). The vaccines have also been shown to prevent precursors to some other cancers associated with HPV. They are targeted at females aged 9-26 years as the vaccines only work if given before infection occurs at all, therefore girls are targeted before their sexual debut (10, 11). The vaccines have been proven to be effective for at least 4-6years. The HPV vaccine was licensed in Nigeria in 2009 (12). HPV vaccination is targeted mainly at adolescents and the spread of information to this age-group has been cited as a major challenge for health professionals (13).

Several studies have been done among university undergraduates and mothers of under five on knowledge, attitude, and acceptability of HPV vaccine (14, 15, 16). These studies revealed that knowledge was poor especially in developing countries but variable levels of acceptability of the vaccine (14, 15, 16). Few studies done among secondary school students on knowledge of cervical cancer and acceptability of human papilloma virus vaccine revealed that knowledge of HPV, cervical cancer and HPV vaccine was poor but willing to be vaccinated high these studies were done outside Nigeria (17, 18). Miri, Sarawak in Malaysia revealed that 61.8 % of respondents had poor knowledge level of cervical cancer and its prevention. The studies on undergraduates targeted older, mature population who have had a sexual debut. This limited those researches as the HPV vaccine is ideal for females (between the ages 9-26 years) who have not had sexual exposure. Many women who have lost their lives to cervical cancer could have been saved through vaccination before infection, screening, and treatment of precancerous lesions. Hence, the need for this study which is focusing on females in senior secondary school to assess their knowledge acceptability and predictors of the HPV vaccine. This study will also serve as a baseline for ed-

ucating Nigeria adolescents on complications of the disease and the benefits of vaccination.

METHODS

Study location

This cross-sectional study was conducted among female students in selected public and private schools in Ife- Central Local Government Area (LGA) of Osun State, southwest Nigeria. Ile-Ife lays between latitude 7°28' N and longitude 4°33' E and had an area of 111km (3 square meters) with a population of 167,254 people according to 2006 census. It is regarded as the source of Yoruba ethnicity and the dominant language was Yoruba. It also serves as a commercial center with several commercial and cooperative banks, state and federal hospitals, private and federal schools and universities. Ife central-local government have 4 public and 23 private secondary schools. Each Secondary school is divided into Junior Secondary School (JSS) and Senior Secondary Schools (SSS). The sample size was determined using Fisher's formula (19). A total of 400 respondents from SSS were selected for the study using a multi-stage sampling method. Students whose assent and parental consent were obtained were recruited into the study. Permission was also obtained from the school authority. Students with a significant physical or mental handicap, which could affect their ability to respond validly to the study instrument, were excluded from the study.

The multi-stage sampling method was used to select eligible respondents over a period of one month. In the first stage, 2 public secondary schools were selected by balloting from the list of four public secondary schools and four private schools from the list of 23 private schools within Ife-central LGA. The number of respondents per school was proportionate to their population sizes. In the selected schools the list of all girls in all the arms in Senior Secondary Schools (SSS) were collected from the class teachers. The girls were recruited from SSS class 1 to 3 into the study using a systematic sampling technique until the desired sample size from each school was reached. Sampling interval was calculated by dividing the total number of students to be recruited from the school by the total number allotted to a class. The first participant was selected using simple random method (by balloting).

Data collection method and instrument

Data were collected using facilitated self-administered questionnaire with several questions adapted from previous studies (17, 20). The questionnaire was translated from English to Yoruba through a two-way process for students who may find the instrument easi-

er to complete in the local language. Questions were asked about respondents' socio-demographic characteristics as well as their, knowledge, attitude on cervical cancer, human papilloma virus vaccine and acceptance of HPV vaccine. All the information was collected in class under the supervision of trained research assistants in the absence of the teachers. Students' knowledge score was calculated out of the 14 knowledge specific questions. Each correct response earned one point, whereas any wrong response attracted no mark. Good knowledge on cervical cancer, human papilloma virus, and human papilloma virus vaccine was given to those respondents who scored greater than or equal to the mean, and poor knowledge on cervical cancer, human papilloma virus, and human papilloma virus vaccine was given to those respondents who scored below the mean score. Students' acceptability of human papilloma virus vaccine score was calculated out of the acceptability specific questions. Each correct response earned one point, whereas any wrong response attracted no mark. High acceptability of human papilloma virus vaccine was given to those respondents who scored above mean score and low acceptability score was given to those respondents who scored below mean score. The instrument was pretested among 20 students in Ife north local government. This was to assess the clarity of the questions and identify ambiguous questions. Permission was obtained from the local inspectorate officers head office in Osogbo and the school authorities of the respective schools used for the study. Informed consents (written) was obtained from the parents and assents from the participants. Participation was entirely voluntary and confidentiality was ensured; codes rather than participants' names were used for individual identification and were stored in a computer that was only accessible to the principal investigator.

Statistical analysis

After data collection, each questionnaire was given a unique code and entered into Statistical Package for Social Sciences (SPSS) version 20. Frequencies of variables were used to check for missed values and outliers. Any error identified at this time was corrected after revision of the original data using the code numbers. Descriptive analysis was used for the socio-demographic characterization of the respondents and other relevant variables (age, sex, education, marital status etc). Chi-square test was used to identify factors associated with students' knowledge of cervical cancer and human papilloma virus vaccine and factors influencing the acceptability of the human papilloma virus vaccine. Logistic regression was used to identify factors predicting the acceptability of HPV vaccine. For all statistical analysis, a P value less than 0.05 was considered significant.

RESULTS

Sociodemographic characteristics of respondents

Majority of the respondents (68.8%) are within the age range 13-15 years. The mean age of respondents was 15 ± 1.2 years. Majority of the respondents (51.2%) are in SSS1. Eighty-six percent of the respondents were Yorubas and majority of the respondent parents had a tertiary level of education (70% of respondent fathers and 66% of respondent mothers) (Table 1).

Table 1. Sociodemographic characteristics of respondents

Variables	Frequency (%)
Age (years)	Mean age = 15 ± 1.2 years
10-12	16 (4)
13-15	275 (68.8)
16-18	107 (26.8)
19-21	2 (0.5)
Total	400 (100)
Class	
SSS1	205 (51.2)
SSS2	195 (48.8)
Total	400 (100)
Religion	
Christianity	291 (72.8)
Islam	109 (27.2)
Total	400 (100)
Ethnicity	
Yoruba	344 (86.0)
Igbo	42 (10.4)
Hausa	14 (3.6)
Total	400 (100)
Fathers educational status	
None	5 (1.2)
Primary	17 (4.4)
Secondary	98 (24.4)
Tertiary	280 (70)
Total	400 (100)
Mothers educational status	
None	11 (2.8)
Primary	18 (4.4)
Secondary	107 (26.8)
Tertiary	264 (66)
Total	400 (100)

Knowledge of HPV, Cervical Cancer & HPV vaccine among respondents

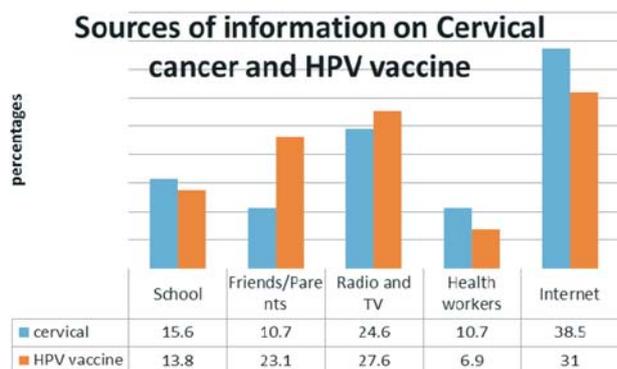
Few of the respondents (13.6%) had ever heard of human papilloma virus. About 30% of respondents have heard about cervical cancer and 41.4% said HPV vaccine is for sexually active people. Majority of the respondents (48.6%) said HPV vaccine should be given at age > 26 years. The overall majority of the respondents 93.2% have poor knowledge of HPV, cervical cancer and the HPV vaccine (Table 2).

Table 2. Awareness, Knowledge of HPV, Cervical Cancer & HPV vaccine among Respondents

Variables	Frequency (%)
Do you know about HPV? (n = 400)	
Yes	54 (13.6)
No	346 (86.4)
If yes how is it transmitted	
Shaking of hands with infected persons	15 (27.8)
Sexual intercourse	30 (55.6)
Sharing of sharp objects	9 (16.6)
Do you know about cervical cancer?	
Yes	122 (30.4)
No	278 (69.6)
HPV vaccine is only for people who are sexually active (n = 29)	
Yes	12 (41.4)
No	17 (58.6)
Risk Factors for Cervical Cancer*	
Family history	75 (18.8)
Early sexual exposure (before age sixteen)	91 (22.8)
Multiple sexual partners	84 (21.2)
Smoking	54 (13.6)
Prolong use of oral contraceptive pills	64 (16.0)
Old age	41.6 (10.4)
Infection with HPV	85 (21.2)
At what age should human papilloma virus vaccine be given? (n = 74)	
8-26 years	13 (17.6)
> 26 years	36 (48.6)
Don't know	22 (29.7)
Knowledge Score	
Good knowledge	27 (6.8)
Poor knowledge	373 (93.2)

Sources of information on cervical cancer and Human Papilloma Virus Vaccine

From Figure 1, the most common source of information on cervical cancer and HPV vaccines was the internet (38.5% and 31.0% respectively). Other com-

**Figure 1.** Sources of information on Cervical cancer and HPV vaccine

mon sources of information were through Mass Media (24.6% cervical cancer and 27.6% for the vaccine), schools (15.6% and 13.8% respectively), and their family members.

The attitude of respondents to cervical cancer, HPV and HPV vaccine

More than three-quarters of the respondents said education on HPV vaccine should be implemented in schools. One-third of the respondents agreed that cervical cancer is a big problem for women and that it causes death. Half of the respondents said it is preferable to vaccinate men and women with the HPV vaccine. About 43.5% and 42.5% of the respondents said HPV vaccine is safe and highly effective. Majority of the respondents (80.8% and 74.8%) agreed they don't have sufficient information on HPV and that HPV vaccination cannot lead to increase risky sexual behavior. The overall majority of the respondents have a good attitude towards HPV vaccine and cervical cancer (Table 3).

Table 3. Attitude of respondents to cervical cancer, HPV and HPV vaccine

Perception/Attitude To Cervical Cancer & Hpv Vaccine	Frequency (%)
Education on HPV should be implemented at school	
Yes	312 (78.0)
No	88 (22.0)
Cervical cancer is a big problem for women	
Yes	261 (65.2)
No	139 (34.8)
Cervical cancer can cause death for women	
Yes	240 (60)
No	160 (40)
It is preferable to vaccinate both men and women	
Yes	214 (53.6)
No	186 (46.4)
I have sufficient information about HPV and its vaccine to decide whether to receive the vaccine	
Yes	77 (19.2)
No	323 (80.8)
I am sure that the HPV vaccine is highly effective	
Yes	170 (42.5)
No	230 (57.6)
I am sure that the HPV vaccine is safe	
Yes	174 (43.5)
No	226 (56.4)
HPV vaccination can lead to an increase in risky sexual behaviour	
Yes	101 (25.2)
No	299 (74.8)

Acceptability of HPV vaccine among respondents

About 40% of the respondents support HPV vaccine for an adolescent. Half (50.8%) of the respondents want the vaccine to be readily available and are ready to be vaccinated if the vaccine is available. The majority (74.8%) of the respondents wants to be more educated on the vaccine. Major reasons why the respondents will not take the vaccine if readily available were lack of parental permission and have had no sexual exposure (91.3% and 83.8% respectively). Only 2.8% of the respondents have been vaccinated and 41.0% were willing to share the fact that they have been vaccinated with their friends. Overall 74.5% of respondents have high acceptability and 25.5% had low acceptability.

Factors significantly associated with acceptability of Human papilloma virus vaccine include Age ($p < 0.001$), mothers' educational level ($p < 0.001$), knowledge ($p = 0.006$), perceived vaccine efficacy ($p < 0.001$) and perceived fatality of cervical cancer ($p < 0.001$). A higher percentage of respondents with good knowledge (88.9%) have high acceptability for the vaccine compared to 62.7% among those with poor knowledge ($p = 0.006$). A higher proportion of respondents whose mother had secondary education and above (66.9%), and those who perceived HPV vaccine to be effective (87.1%) had high acceptability score for HPV vaccine (Table 4).

The predictors of acceptability of HPV vaccine as determined by logistic regression is as shown in Table 5

The result showed that respondents within the age group 16-21 years were four times more likely to accept HPV vaccination than their younger counterpart (Adjusted odds ratio (AOR) 4.05, CI = 2.30-5.45). Respondents with good knowledge of cervical cancer, HPV and HPV vaccine were three times more likely to accept the vaccine compared to those with poor know-

Table 4. Acceptability of HPV vaccine among respondents

Acceptability of HPV vaccine	Frequency (%)
Do you support Human Papilloma virus vaccine for adolescent	
Yes	147 (39.7)
No	253 (63.3)
Do you want human papilloma virus vaccine to be readily available	
Yes	203 (50.8)
No	197 (49.2)
Do you want adolescent to be more educated on this vaccine	
Yes	299 (74.8)
No	101 (25.2)
If available, will you accept the vaccine?	
Yes	203 (50.8)
No	197 (49.2)
* If no why	
My parents will not allow me to	180 (91.3)
I'm not having sexual intercourse yet	165 (83.8)
I think it is expensive	57 (28.9)
I don't know where to get it	28 (14.2)
I'm afraid of its side effects	45 (22.8)
I don't think I need it	60 (30.5)
Have you been vaccinated with HPV vaccine?	
Yes	11 (2.8)
No	389 (97.2)
Are you willing to share the fact that you have been vaccinated with friends?	
Yes	165 (41.2)
No	235 (58.8)
Acceptability score	
High (≥ 2.5)	298 (74.5)
Low (< 2.5)	102 (25.5)

Table 5. Predictors of HPV vaccine acceptability among respondents

Variables	Category of Variables	AOR (95%CI)	P-Value
Age group in years	10-15 yrs (Ref)	1	0.001
	16-21 yrs	4.05 (2.30– 5.45)	
Knowledge	Poor (Ref)	1	0.010
	Good	2.50 (2.31 – 6.83)	
Mothers level of education	Below secondary (Ref)	1	0.004
	Secondary and above	1.55 (2.62 - 4.58)	
Perceived vaccine efficacy	No (Ref)	1	0.022
	Yes	4.13 (1.49 – 4.19)	
Perceived fatality of cancer	No (Ref)	1	0.047
	Yes	4.13 (1.49 – 4.19)	

ledge (AOR = 2.50, CI = 2.31-6.83). Respondents whose mothers had a secondary and above level of education were two times more likely to accept the vaccine compared to those whose mother had below secondary education (AOR = 1.55, CI = 2.62 - 4.58). Respondents who perceived the vaccine as effective were two times more likely to accept the vaccine compared to those who do not (AOR = 1.57, CI = 0.49 – 3.18). Girls who perceived cervical to be a serious disease were four times more likely to accept the vaccine compared to those who do not (AOR = 4.13, CI = 1.49 – 4.19) (Table 5).

DISCUSSION

To avoid diseases altogether is ideal but this is only possible in a limited number of cases. Immunization which can be achieved by vaccination is one of the currently available interventions aimed at specific protection. In this study, only a few of our respondents have heard about cervical cancer, HPV vaccine, and HPV. Also, the majority of the respondents had poor knowledge of cervical cancer, HPV and HPV vaccine. This finding was in keeping with the findings of previous studies among adolescents in Italy which revealed a low level of awareness on HPV (29.8%) (21) and also a study among upper secondary school students in Sweden which placed awareness level on HPV at 13.5% (22). The finding that the majority of respondents in this study had poor knowledge was in keeping with findings of a study done among secondary school students in Sarawak East Malaysia which revealed that 68.1% of the respondents had poor knowledge of cervical cancer (17). Also, findings of studies done in Nigeria among the general population in Lagos (16) and among medical students in Benin (23) on HPV, cervical cancer and HPV vaccine revealed poor knowledge. Although the good knowledge score obtained in the above-mentioned studies was greater than that of our study this was probably because the study was done among medical students and undergraduates who are supposedly more knowledgeable and more exposed than the secondary school students. The poor knowledge among the students reflects a lack of relevant education and may compromise their awareness on their perceived susceptibility to cervical cancer and HPV infection and the severity of its consequences.

Therefore a lot of effort should be put into health educating this upcoming generation on cervical cancer and how it can be prevented. The main source of information on cervical cancer and the HPV vaccine in this study was majorly internet closely followed by media. This was in keeping with findings of a study done in Sawarak Malaysia which revealed the major source of information as internet (32%) followed by media

which was (17%) (17) but our findings were contrary to findings of studies done in Lagos among medical students which revealed major source of information to be school teaching (14). From our study, the majority of the student obtained information from the internet indicating access to internet information. Information obtained from this route is seen by them as trustworthy. Therefore, effort should be made to disseminate more updated and verified information regarding HPV infection, HPV vaccine and cervical cancer through the media and safe websites. Although knowledge of cervical cancer, HPV and HPV vaccine was poor among respondents in this study their attitude towards HPV vaccine was positive. More than three-quarters of the respondents said education on HPV vaccine should be implemented in schools. Half of the respondents said it is preferable to vaccinate men and women with the HPV vaccine. Less than half of the respondents said HPV vaccine is safe and highly effective. Majority of the respondents (80.8% and 74.8%) agreed they don't have sufficient information on HPV. This is in keeping with findings of previous studies (20, 24). The finding in our study could be due to the fact that students are aware of routine immunization in children which is known to prevent childhood illnesses and a such may believe that any new vaccine is important in preventing targeted disease.

Acceptability of HPV was high in this study, although only 2.8% have been vaccinated. Less than half of those who have been vaccinated were willing to share the fact that they have been vaccinated with friends. The high acceptability of the HPV vaccine in this study is similar to findings of previous studies done. A study among Swedish upper secondary school students which revealed a high acceptance of HPV among students although awareness and intention to be vaccinated in the future (22). Also, a study titled Public knowledge and attitudes towards Human Papilloma Virus (HPV) vaccination which placed acceptance of HPV vaccine at 88% among the respondents (25). Logistic regression done in this study revealed that factors that predict acceptability of HPV vaccine to the younger age of respondents, secondary and above level of education among respondents, good knowledge of cervical cancer and HPV vaccine, perceived vaccine efficacy and perceived fatality of cervical cancer. This was in keeping with the findings of other studies done in Hong-Kong among adolescent girls which revealed self-perceived susceptibility, social norm and social influences as factors influencing the acceptability of HPV vaccine (24). A study done in Germany among girls aged 9 to 17 years revealed that girls whose mothers had high education were more likely to have already been vaccinated compared to those whose mothers had basic education (26). Brewer and colleagues

found higher vaccine uptake in girls of parents with a college education compared to a high school education (27). In our study, only 2.8% of the respondents have been vaccinated. Other countries, in contrast to Nigeria, have implemented a nationwide organized, school-based HPV immunization programmes and therefore have direct access to the target population. Australia implemented a school-based programme in 2007 and had achieved vaccine coverage of 64 and 80% for girls by 2009 (28). Scotland National Health Services reported that, after implementing a school-based vaccination programme, 88 % of girls in the second, fifth and sixth years of the secondary school received the first two vaccine doses between 2008 and 2009 (29).

Limitations

Our study includes using self-reported data. It could be argued that very young girls may find it difficult understanding the question relating to cervical cancer HPV and HPV vaccination. However, the girls filled out the questionnaire with the assistance of the research assistant and the questions were simplified with the avoidance of the use of medical terms as much as possible.

Implications for Practice and/or Policy

The HPV vaccine was licensed in Nigeria in 2009 and it has not to be introduced into the National immunization programme or a school-based immunization programme organized. Based on the findings of this study that showed high acceptability of the HPV vaccine, it is therefore important for the HPV vaccine to be introduced to our schools.

Sažetak

PREDIKTORI I PRIHVATANJE HPV VAKCINE MEĐU STARIJIM UČENICAMA SREDNJIH ŠKOLA U ILE-IFEU

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Uvod: Karcinom cerviksa je drugi po učestalosti tumor kod žena širom sveta i Nigeriji. Smatra se da je humani papiloma virus (HPV) jedan od vodećih uzroka za izazivanje karcinoma grlića materice. Činjenica da HPV vakcinacija može da spreči pojavu ovog smrtnosnog raka je već neko vreme ustanovljena. Iako su vakcine licencirane u Nigeriji od 2008. godine i dostupne širom sveta, ona još uvek nije uvedena u kalendar obavezne imunizacije u Nigeriji. Ova studija ima

CONCLUSION

It is therefore important for health educators, school health specialist to health educate students and teachers in schools through health talk on cervical cancer human papilloma virus and HPV vaccine as the participants in this study desire to know more about the vaccine and also organized programmes on the media that will enlighten the public on the danger of cervical cancer and importance of the HPV vaccine. It is also important to lobby and advocate for the HPV vaccine to be given to school girls who are not sexually active free so as to improve coverage as participants in this study express their desire to want the vaccine to be readily available.

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za cilj da ispita prediktore i prihvatanje HPV vakcine među starijim učenicama srednjih škola u Ile-Ifeu.

Metod: Ova deskriptivna studija uvrstila je 400 ispitanika, nasumično izabranih iz različitih srednjih škola u centralnoj regiji Ile-Ife-a. Podaci su dobijeni korišćenjem upitnika, koji je imao za cilj da ispita nivo znanja, stavove i prihvatanje karcinoma grlića materice, humanog papiloma virusa, kao i HPV vakcine. Podaci su analizirani korišćenjem deskriptivne i inferentne statistike.

Rezultati: Najveći broj ispitanika (93,2%) imao je jako nizak stepen znanja o karcinomu grlića materice, HPV i HPV vakcini. Stavovi prema karcinomu grlića materice i HPV vakcini su bili veoma dobri, s tim da je 74,5% imalo izuzetno visok stepen prihvatanja HPV vakcine. Samo 2,8% ispitanika je bilo vakcinisano. Prediktori prihvatanja HPV vakcine su bili: mlađa uzrasna grupa ((AOR) 4,05, CI = 2,30-5,45), dosta dobro znanje iz ove oblasti ((AOR = 2,50, CI = 2,31 - 6,83), viši stepen obrazovanja majke ((AOR = 1,55, CI = 2,62 - 4,58), shvatanje stope smrtnosti kod osoba obolelih od karcinoma grlića materice (AOR = 4,13, CI = 1,49 - 4,19) i razumevanje efikasnosti HPV vakcine (AOR = 1,57, CI = 0,49 - 3,18).

Zaključak: Nivo znanja starijih učenica srednjih škola o karcinomu grlića materice, HPV i HPV vakcini je izuzetno nizak, iako je prihvatanje HPV vakcine izuzetno visoko. Visoki stepen prihvatanja vakcina u ovoj studiji je odraz želje i spremnosti grupe u riziku, da uči više o ovoj temi. Postoji jaka potreba da se naprave zdravstveni programi u školama, koji će se fokusirati na zdravstvenu edukaciju učenika, kako bi se sprečio razvoj ovog preventabilnog karcinoma i kako bi se obezbedio veći broj vakcina. Uključenje HPV vakcine u Nacionalni program obavezne imunizacije u Nigeriji može izuzetno da podigne nivo sveći o karcinomu grlića materice i prihvatanju vakcina.

ključne reči: znanje, prihvatanje, HPV vakcine, starije učenice srednjih škola.

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