

Awareness of HPV and Compliance Among Women of Childbearing Age in OGBIA LGA Bayelsa State, Nigeria

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Abstract

This study was aimed to assess the factors associated with compliance to HPV vaccination among women of child bearing age in selected communities in Ogbia LGA.

Methods: A simple random technique using structured questionnaire and informed consent was adapted to obtain information from the respondents.

Results: The analysis on awareness shows that 61.86% of respondents has heard of the HPV vaccine, with nearly half (46.05%) receiving this information from mothers or family members. Despite the moderate awareness, only 40.11% of the respondents had received the HPV vaccine leaving a gap of 59.89% unvaccinated. Compliance was driven primarily by perceptions of HPV prevention (58.48%) and immune system strengthening (69.21%). Interestingly, 76.27% of respondents believed the vaccine was designed exclusively for females while multiple factors were identified as barriers to HPV vaccination compliance, 28.53% shows fear of side effects, 14.12% and 14.41% was due to religion background and limited access to health facilities. Furthermore, 17.51% reported negative attitude of health workers and 12.72% was due to low vaccine coverage. Findings from this study also show that cost of vaccine (12.71%) has made most respondent not to comply with HPV vaccine.

Conclusion: Ultimately, while awareness is improving, comprehensive efforts are needed to convert knowledge into practice. Without targeted interventions, the gap between awareness and uptake may continue to undermine public health efforts to eliminate HPV-related diseases, particularly cervical cancer. 'Hence' individuals with HPV versus without HPV vaccination may require Sirtuin 1 activators versus Sirtuin 1 inhibitors with relevance to the treatment of the HPV disease and cancer. Although HPV is most often associated with cervical cancer, the virus can also cause genital warts and cancers in males, such as penile and oropharyngeal cancers. Thus, male inclusion in vaccination campaigns remains a significant public health concern.

Key words: compliance; cancer; cervical; HPV; vaccination

Introduction:

Human Papillomavirus is a common sexually transmitted infection associated with various cancers. Among these, high-risk HPV types 16 and 18 are the most commonly linked to cervical cancer, accounting for about 70% of all cases (1,2). Globally, cervical cancer is the fourth most common cancer among women, and it is the leading cause of cancer-related mortality in developing countries (3). Females reluctant to vaccine may be due to misconception and lack of trust to intervention strategies (4,5). Reduction depends on creating awareness strategically to prevent the virus through vaccination at the required doses. However, findings have shown most aged women not to yield since they have been infected. This includes their religion, level of education, culture and social backgrounds (6,7,8,9,10).

The virus is contacted through skin, sex etc with no symptoms but heals spontaneously in most cases on their own though there is no cure for the virus. Infact almost all cervical cancers sprangs from hpv with the 18 strain resulting in about 90% of cases. (11,12,13,14). Having multiple sex partners, smoking, reduced immune physiology are contributing factors for persistent occurrences (15).

Materials and Methods:

This study adopts a descriptive cross-sectional research design.

Study Area:

This research was conducted at Ogbia, Otuasega, Kolo and Otuabagi communities in Ogbia L GA

Study Population:

The target population was women of child bearing age in selected Ogbia LGA communities.

Sample Size

The minimum sample size for this study was calculated using prevalence of 24% from previous studies conducted by Oboma et al, (16) among female aged 16-18yrs in some communities in Bayelsa State. Using Tamoughna formulae $n = pq/(e/1.96)^2$

Where

n = sample size,

P = working prevalence

$Q = 100 - P$

e = marginal sample error tolerated at 95%-degree confidence

$n = 24 \times 100 / (e/1.96)^2$

$n = 24 \times 87.4 / (5/1.96)^2 = 2097.6 / 6.5104$

$n = 322.19$ participants

non-response rate at 10%

$= 10/100 \times 322.19 = 0.1 \times 322.19 = 32.219$

Sample Size = $322.19 + 32.219 = 354$

Sampling Technique-Multi stage

Stage 1: Selection of (4) communities.

Stage 2: The desired sample sized was obtained from the selected communities using a simple random sampling technique.

Stage 3: The stratified sampling technique was used, where each community form a stratum

Data Collection

Structured questionnaires with closed and open-ended questions.

Data Analysis

SPSS version 24.0.

Ethical Considerations

Institutional ethical approval was obtained for this study while consent was sought verbally before conducting this study

from all participants

Results:

Variable	Category	Frequency (n)	Percentage (%)
Age	15-22	51	14.41
	23-25	61	17.23
	26-33	92	25.99
	34-41	93	26.27
	42-49	57	16.10
Tribe	Igbo	80	22.599
	Yoruba	60	16.949
	Hausa	70	19.774
	Ijaws	104	29.379
	Others	40	11.299
Education	Primary	54	15.25
	Secondary	190	53.67
	Tertiary	110	31.08
Religion	Christianity	240	67.79
	Islam	65	18.36
	Traditional Dwellers	49	13.85

Table 1: Socio-Demographic Data of Respondent

The table 1 above shows the socio-demographic data, concerning the age group, 34-41years makes up the largest portion (26.27%) of the sample, suggesting that this demographic is the most represented likely indicating adults in their reproductive and decision-making years. The 15-22 and 42-49 groups are equally represented (14.41), and (16.10%) suggesting almost a balanced participation from younger and older adults. Respondents religion indicates that Ijaw tribe is the most represented in the sample (29.379%), followed by the Igbo (22.599%) and Hausa (19.774%) groups, Yoruba and 'Others' have the least representation (16.949% and 11.299%) respectively. The distribution of respondents educational status shows that majority (53.67%) of respondents have secondary education, while 31.08% have attained tertiary education, only 15.25% have primary education. The distribution of respondent's religion shows that majority of respondents were identify as Christians (67.79%), followed by Muslims (18.36%), and (13.85%) traditional religions.

Variables (n=200)	Frequency N	Percentage (%)	Mean ± Std dev
Are you aware of HPV vaccine			
Yes	219	61.86	0.28±0.29
No	135	38.14	
Total			
If yes what is your source of information (n=354)			
a) Books and magazines	36	10.17	
b) Teachers/friends	106	29.94	
c) Mothers/family members	163	46.05	
d) Media/television	28	7.91	
e) Internet	21	5.93	
Total	354	100	
Have you received the vaccine? Yes	142	40.11	
No	212	59.89	

Table 2: Level of awareness of HPV Vaccination

The analysis shows that majority of respondents (61.86%) were aware of the HPV vaccination, a significant proportion 38.14% remains unaware, however out of (n=219) respondents who were aware of HPV vaccination, the most common sources of information towards HPV were mothers/family members indicating 46.05%, teachers/friends were 29.94%, media/television were 7.91%, books and magazine were 10.17% while the least respondents had their source 5.93% through internet

s/n	Variables	Frequency	(%)
1.	Why do you comply with the vaccine? (n=354)		
a.	Because its Less expensive		
	Yes	134	37.85
	No	220	62.15
b.	Prevents HPV		
	Yes	207	58.48
	No	147	41.52
c.	Builds immune system		
	Yes	256	72.32
	No	98	27.68
d.	Not against my ethnic background		
	Yes	245	69.21
	No	109	30.79
e.	Designed for women only		
	Yes	270	76.27
f.	No	84	23.73

Table 3: Compliance with HPV Vaccination

The table 3 indicates the compliance with HPV vaccination. Moreover, reasons for respondents' compliance indicates that out of the (n=354) respondents consider for this study. Respondents were of strong opinion that the vaccine were not less expensive indicating 62.15% despite the fact they comply with vaccination, 58.48% of the respondent perceive to comply because it prevents HPV, 72.32% of the respondents affirm to comply because it builds the immune system, 69.21% reported that its not against their ethnic background, 76.27% believed it is design for women only.

s/n	What made you not comply with HPV vaccination?	Frequency	Percentage (%)	Mean ± Std Dev
a.	Fear of side effect	101	28.53	
b.	It against my religion	50	14.12	
c.	I can't use the vaccine because is expensive	45	12.71	
d.	Limited access to health care facilities	51	14.41	5.90 ±0.13
e.	Attitude of health workers	62	17.51	
	The vaccine coverage for HPV is low in our territory	45	12.72	
	Total	354	100	

Table 4: Factors Influencing Compliance to HPV Vaccination

The table 4 above revealed factors influencing respondent's compliance to HPV vaccination, it revealed that:

- **Fear of side effects (28.53%)** was the most frequently cited reason for non-compliance. This indicates that concerns about vaccine safety remain a major barrier, suggesting the need for better education and reassurance about the HPV vaccine's safety profile.
- **Attitude of health workers (17.51%)** was the second most common factor. Negative interactions or perceived unfriendliness from healthcare providers can discourage individuals from accessing vaccination services. This highlights the importance of training health workers to communicate effectively and empathetically.

- **Limited access to healthcare facilities (14.41%)** and **religious objections (14.12%)** were also notable barriers. Accessibility challenges may relate to geographic, infrastructural, or financial issues, while religious beliefs can strongly influence health behaviors, requiring culturally sensitive engagement and outreach.
- The **cost of the vaccine (12.71%)** and **low vaccine coverage in the territory (12.72%)** also influenced compliance, indicating economic constraints and possible supply or distribution issues.

Discussion:

This study indicates that family members play a significant role in health education. While this finding is encouraging, it also highlights the limitations of informal information sources, which may not always be accurate or complete. Other studies that corroborate with these findings shows that reliance on non-professional sources is common due to weak health systems and low literacy levels (17,18). Despite the moderate awareness, only 40.11% of the respondents had received the HPV vaccine leaving a gap of 59.89% unvaccinated. This highlights a significant gap between knowledge and action. Compliance was driven primarily by perceptions of HPV prevention (58.48%) and immune system strengthening (69.21%). These are in line with scientifically validated benefits of the HPV vaccine. Research has shown that HPV vaccines are up to 90% effective in preventing cervical cancer and other HPV-related diseases when administered prior to exposure (19,20,21). Interestingly, 76.27% of respondents believed the vaccine was designed exclusively for females, a belief echoed in other studies from sub-Saharan Africa (22,23).

Concerning the factors influencing the compliance with HPV, however the study indicates that multiple factors were identified as barriers to HPV vaccination compliance 28.53% indicating fear of side effects. This study is consistent with global studies, where safety concerns and rumors about infertility or severe reactions are major contributors to vaccine hesitancy (24,25,26). The analysis shows that 17.51% reported negative attitude of health workers. This finding is line with the assertion made by (27), who reported that the attitude and communication style of healthcare professionals significantly influence vaccine acceptance. This study also shows 14.41% limited access and 12.72% with decreased coverage. This outcome is in congruent with (28,29). This finding is low compare to studies conducted in African region (30).

Conclusion:

This study reveals a relatively moderate level of awareness to the HPV vaccine, with a significant portion of information coming from non-formal sources. Vaccine compliance remains low, despite positive perceptions about its protective benefits with multiple barriers continuing to hinder widespread adoption of HPV vaccination. The persistence of the belief that the vaccine is only for women also indicates the need for broader educational initiatives targeting all genders.

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