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KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS CERVICAL CANCER SCREENING AND HUMAN PAPILLOMAVIRUS VACCINATION AMONG WOMEN IN PASSO COMMUNITY, ABUJA, NIGERIA

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Abstract

Cervical cancer is a common cancer among women globally. In Nigeria, it is the second most prevalent cancer among women aged 15–44 years. Persistent infection with high-risk human papillomavirus (HPV) types, particularly HPV 16 and 18, is the primary cause. Despite effective prevention strategies such as HPV vaccination and routine screening, uptake in low- and middle-income countries (LMICs) remains poor due to low awareness, socioeconomic barriers, and inadequate health infrastructure. This study assessed the knowledge, attitude, and practice (KAP) towards cervical cancer screening and HPV vaccination among women in Passo Community, Gwagwalada Area Council, Abuja, Nigeria. A descriptive cross-sectional study was conducted among 217 adolescent and adult females (15–65 years) using a cluster sampling technique. Data were collected using a pre-tested, semi-structured questionnaire and analyzed using SPSS version 24. Categorical variables were summarized as frequencies and percentages. Associations between variables were tested using Pearson's Chi-square, with $p<0.05$ considered statistically significant. Awareness of cervical cancer was 45.5%, while only 13.4% were aware of HPV and 14.3% knew about HPV vaccination. Good knowledge of cervical cancer was found in 31.3% of respondents, and of screening in 30.0%. Most respondents (75.1%) displayed a positive attitude towards screening; however, only 9.7% had ever undergone screening, and none had received HPV vaccination. The most cited barriers were lack of awareness and uncertainty about where to access services. Despite a generally positive attitude towards screening, knowledge and practice of cervical cancer prevention in this community were low. Public health interventions should focus on awareness creation, accessible screening services, and HPV vaccination programs to reduce the burden of cervical cancer.

Key Words: Cervical cancer, HPV, Screening, Vaccination, Knowledge, Attitude, Practice, Nigeria.

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Introduction

Cervical cancer is a malignant tumour of the cervix arising from the transformation of normal cervical epithelial cells following persistent infection with oncogenic human papillomavirus (HPV) types [1]. HPV is a common sexually transmitted infection affecting most sexually active individuals at some point in their lives [1,2]. The disease typically presents in middle-aged women, with the mean age at diagnosis reported at 53 years, while the pre-malignant phase often occurs earlier [2].

Globally, cervical cancer is the fourth most common cancer in women, with an estimated 604,127 new cases and 341,831 deaths reported in 2020 [3,4]. According to theGlobal Cancer Incidence, Mortality and Prevalence (GLOBOCAN) 2020 report, the mortality-to-incidence ratio stands at 57%, underscoring its substantial public health impact [5]. In Africa, approximately 117,316 women are diagnosed annually, with 76,745 deaths recorded [7]. In Nigeria, about 56.2 million women aged ≥15 years are at risk, with 12,075 new cases and 7,968 deaths each year [7]. An estimated 3.5% of Nigerian women harbour HPV-16/18 at any given time, and approximately 66.9% of invasive cervical cancer cases are attributable to these types [7].

The well-established causal relationship between HPV and cervical cancer has made prevention strategies such as HPV vaccination and regular cervical screening critical in reducing disease incidence [8, 9]. Screening can detect precursor lesions, termed cervical intraepithelial neoplasia (CIN), which progress to invasive cancer over several years if untreated [8]. Risk factors for cervical cancer include early sexual debut, multiple sexual partners, having a male partner with multiple partners, high parity, smoking, and

low socioeconomic status [9]. Many of these are modifiable through community-level interventions, including health education, safe sexual practices, delayed sexual debut, and routine screening.

The Centers for Disease Control and Prevention (CDC) recommend HPV vaccination for preadolescents aged 11–12 years, ideally before sexual exposure, to prevent HPV-related malignancies [10]. Despite this, in many LMICs including Nigeria; HPV vaccination and screening uptake remain suboptimal due to low awareness, limited access, high costs, and cultural perceptions [11].

This study aimed to assess the knowledge, attitude, and practice (KAP) towards cervical cancer screening and HPV vaccination among women in Passo Community, Gwagwalada Area Council, Abuja. The findings will inform targeted interventions to improve preventive practices and reduce cervical cancer burden in similar settings.

Methods

Study Design and Setting

A descriptive cross-sectional study was conducted in Passo, a town within Paiko ward, Gwagwalada Area Council, Federal Capital Territory (FCT), Nigeria. Gwagwalada is one of six area councils in the FCT, with an estimated population of 160,000 and a landmass of 1,069.6 km^2. The area comprises urban and rural communities, with agriculture as the main occupation of the indigenous Gwari people.

Study Population

The target population comprised adolescent and adult females aged 15–65 years residing in Passo Community. Women who were mentally ill, critically ill, or unable to provide informed consent were excluded.

Sample Size

The sample size was calculated using the Leslie-Kish formula, assuming a prevalence (p) of cervical cancer from a previous Nigerian study at 13.6% and a 95% confidence level, and 5% margin of error. This yielded a sample size of 181, which was increased by 20% for potential non-response, giving a final sample size of 217 participants.

Sampling Technique

A cluster sampling technique was used starting with six Area councils of the Federal Capital Territory as clusters. Gwagwalada Area Council was selected using simple random sampling and Passo was selected out of the ten wards in the council using simple random sampling. All eligible and consenting respondents were studied at the respective households.

Data Collection Instrument and Procedure

I. Data were collected using a pre-tested, semi-structured, interviewer-assisted questionnaire divided into seven sections:

a. Socio-demographic characteristics.
b. Awareness of cervical cancer.
c. Knowledge of cervical cancer.
d. Knowledge of cervical cancer screening.
e. Attitude towards screening.
f. Practice of cervical cancer screening.
g. Practice of HPV vaccination.

Data Analysis

Data were entered and analyzed using SPSS version 24. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize the data. Associations between categorical variables were examined using Pearson's Chi-square test, with statistical significance set at $p<0.05$ at a 95% confidence interval.

Ethical Considerations

Ethical approval was obtained from the Health Research and Ethics Committee of the University of Abuja Teaching Hospital. Written informed consent was obtained from all participants before enrolment. Participation was voluntary, and confidentiality was maintained throughout the study.

Results

Socio-Demographic Characteristics

A total of 217 women participated, giving a 100% response rate. Ages ranged from 15–65 years (mean = 29.85 years, SD = 10.72). Most respondents were aged 25–34 years (37.8%), married (48.8%), and of Gwari ethnicity (29.0%). Christianity was the predominant religion (63.1%). Over half (52.5%) had secondary education, and 35.5% were self-employed. Nearly half (47.0%) reported no monthly income as displayed in table 1 below:

Table 1. Socio-demographic characteristics of respondents (N=217)

Variable	Category	n (%)
Age (years)	15–24	74 (34.1)
	25–34	82 (37.8)
	35–44	37 (17.1)
	45–54	15 (6.9)
	55–65	9 (4.1)
Marital status	Married	106 (48.8)
	Single	97 (44.7)
	Widowed	12 (5.5)
	Separated	1 (0.5)
	Cohabiting	1 (0.5)
Ethnicity	Hausa	7 (3.2)
	Igbo	31 (14.3)
	Yoruba	19 (8.8)
	Gwari	63 (29.0)
	Others	97 (44.7)
Religion	Christianity	137 (63.1)
	Islam	80 (36.9)
Education	None	6 (2.8)
	Primary	23 (10.6)
	Secondary	114 (52.5)
	Tertiary	74 (34.1)
Occupation	Self-employed	77 (35.5)
	Civil servant	33 (15.2)
	Unemployed	15 (6.9)

	Housewife	20 (9.2)
	Student	67 (30.9)
	Others	5 (2.3)
Monthly income	None	102 (47.0)
	<₦20,000	42 (19.4)
	₦20,000–₦49,000	53 (24.4)
	₦50,000–₦99,000	17 (7.8)
	≥₦100,000	3 (1.4)

Awareness of Cervical Cancer and HPV

Fewer than half (45.5%) had heard of cervical cancer, and only 13.4% were aware of HPV. Awareness of HPV vaccination was reported by 14.3%. Health facilities (25.8%) were the most common source of information.

Table 2. Awareness of cervical cancer, HPV, and HPV vaccination

Variable	Yes n (%)	No n (%)
Ever heard of cervical cancer?	99 (45.5)	118 (54.4)
Heard of HPV?	29 (13.4)	188 (86.6)
Heard of HPV vaccination?	31 (14.3)	186 (85.7)

Knowledge of Cervical Cancer and Screening

Overall, 31.3% had good knowledge of cervical cancer, and 30.0% had good knowledge of screening. Only 35.9% had heard of cervical cancer screening, and 19.4% knew about Pap smear testing.

Table 3. Knowledge of cervical cancer and screening

Knowledge type	Good n (%)	Poor n (%) p-value
Cervical cancer	68 (31.3)	149 (68.7)>0.05
Screening	65 (30.0)	152 (70.0)

Attitude towards Cervical Cancer Screening

A majority (75.1%) had a positive attitude towards screening, with 81.6% indicating willingness if services were free. However, only 44.7% were willing regardless of cost.

Table 4. Attitude towards cervical cancer screening

Attitude category	n (%)	p-value
Positive attitude	163 (75.1)	0.001
Negative attitude	54 (24.9)	

Practice of Screening and HPV Vaccination

Only 9.7% had ever been screened for cervical cancer, with most unable to state the recommended screening frequency. None had received HPV vaccination. The main reasons for non-participation were lack of awareness (33.2% for screening; 81.6% for vaccination) and not knowing where services were offered.

Table 5. Practice of cervical cancer screening and HPV vaccination

Practice	Yes n (%)	No n (%)p-value
Ever screened for cervical cancer	21 (9.7)	196 (90.3)> 0.05
Ever vaccinated against HPV	0 (0.0)	217 (100.0)

Discussion

This study assessed knowledge, attitude, and practice of cervical cancer screening and HPV vaccination among women in Passo Community, Abuja. Findings revealed low awareness and knowledge, a generally positive attitude, and very poor preventive practices. Fewer than half of respondents were aware of cervical cancer, and only 13.4% knew about HPV. This is similar to findings from Lagos, Nigeria (12.8%), but far below rates in Ethiopia (90%) and Botswana (100%) [12,13.14]. Awareness of HPV vaccination was also poor (14.3%), consistent with trends in LMICs[25].Only about a third had good knowledge of cervical cancer and screening. These results mirror findings from Saudi Arabia and Zaria, Nigeria [15,16]. Education level was positively associated with better knowledge, as seen in studies from India[17] and Ethiopia [17,19].

Despite limited knowledge, most participants (75.1%) had a positive attitude towards screening, with over 80% willing to screen if services were free. Similar attitudes have been reported in Ethiopia.[18]Higher education, occupation, and income were associated with positive attitudes [19].

Only 9.7% had undergone screening comparable to reports in Gombe state, Nigeria (9.5%)[20] and India (8–10%) [21,22] but much lower than Kenya (25.6%) [23]. No participant had received HPV vaccination, a finding consistent with low uptake in Nigeria[25], Indonesia[26], and Brazil [27]. Main barriers were lack of awareness and uncertainty about service locations, aligning with qualitative studies in Nigeri [24].

The mismatch between positive attitude and low practice suggests awareness campaigns alone are insufficient. Integrating screening into routine reproductive health services, subsidizing vaccination, and community outreach could improve uptake.

The cross-sectional design limits causal inference, and self-reported data may be subject to recall bias. However, findings provide a basis for targeted intervention in similar communities.

Conclusion

Despite a generally positive attitude towards cervical cancer screening, this study found low levels of awareness and knowledge, coupled with poor preventive practices, among women in Passo Community. Awareness of HPV and its vaccine was particularly low, and no participant had ever received the HPV vaccine. These findings point to significant missed opportunities for prevention.

The observed gap between attitude and practice highlights the need for more than just awareness campaigns. Comprehensive strategies should include sustained community-based health education, integration of cervical cancer screening into routine reproductive health services, and government supported vaccination programs. Ensuring that services are affordable, accessible, and culturally acceptable is important.

Strengthening partnerships between healthcare providers, policymakers, and community leaders could foster trust and encourage greater participation in screening and vaccination initiatives. Such targeted interventions are essential to reduce the burden of cervical cancer in Nigeria and to meet global elimination targets set by the World Health Organization.

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Ethical Approval

Ethical clearance has been obtained from the University of Abuja Teaching Hospital.

Inform Consent

Taken from Study Participants.

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Author Contribution

Both Authors contributed equally

Conflict of Interest

None Declared

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