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# Knowledge and Prevention Practices of Human Papillomavirus in Promoting Public Health Education among Undergraduate Students of Nnamdi Azikiwe University

Chioma Precious Alozie[1*], Joy Ukanne Ikegulu[1], Sabina N. Igwilo[1], Chinyere Monique Okeke[2], Kenechukwu Uchenna Machie[1]

[1]Department of Health Promotion and Public Health Education, Faculty of Education, Nnamdi Azikiwe University, Awka

[2]Department of Environmental Health Science, Faculty of Medical Sciences, Nnamdi Azikiwe University, Awka.

*Corresponding author: cp.alozie@unizik.edu.ng, Phone: 08064034026

## Abstract

This study investigated the knowledge and prevention of Human Papilloma Virus (HPV) in Promoting Public Health Education among Undergraduate Students of Nnamdi Azikiwe University, Awka. A descriptive survey design was employed for the study. The population comprised of 48, 271 students in Nnamdi Azikiwe University. The sample size comprised of 450 students selected through a multi-stage sampling procedure. Three research questions guided the study, and an Instrument titled "Knowledge and Prevention of HPV in Promoting Public Health Education among Undergraduate Students of Nnamdi Azikiwe University" was used for the study. An 18- item structured questionnaire was used for this study. Kuder-Richardson was the statistic used to measure the internal consistency of the instrument. The result yielded the coefficient of 0.89. Data obtained were analyzed using frequency and percentage. The major findings show that undergraduates have a moderate knowledge of HPV, which is the gap that needs to be filled in this research, because adequate knowledge of HPV can reduce the prevalence of the infection. Another major finding was that students have a poor knowledge of the health implications of HPV as well as its preventive strategies. Implications of the findings were indicated, that students should refrain from smoking since it raises the risk of cervical cancer. They should undergo a pap test every three years for women aged 21 to 29 and every five years with HPV co-testing for women between 30 and 65. HPV Vaccination is recommended for boys and girls aged 11and 12 years.

**Keywords:** Knowledge, Prevention, Human papillomavirus.

## Introduction

Human Papilloma Virus (HPV) is a significant public health concern, with a high prevalence among young adults (World Health Organization [WHO], 2020). Human Papilloma Virus (HPV) is one of the most commonly diagnosed Sexually Transmitted Infections (STIs) globally, with significant implication for public health, According to the World Health Organization nearly sexually active individuals will contact HPV at some point in their lives (WHO, 2022), HPV is causally associated with various cancers including cervical, anal, oropharyngeal, vulva and vaginal cancers (de Marteal et al., 2020). Human papillomavirus (HPV) is a viral infection that can be transmitted through skin-to-skin contact. According to Elissa (2021) the risk factors associated with HPV, infection are primarily related to sexual behavior, including higher numbers of

lifetime and recent sex partners. Results of epidemiologic studies are less consistent for other risk factors, including younger age at sexual initiation, higher number of pregnancies, genetic factors, smoking, and lack of circumcision of the male partner.

The HPV is a DNA virus that infects epithelial cells, particularly those of the genital tract. It is primarily transmitted through sexual contact, making sexually active individuals, including young adults, particularly vulnerable (Bosch et al., 2008). The HPV infection is highly prevalent, with approximately 80% of sexually active individuals acquiring at least one type of HPV in their lifetime (Markowitz et al., 2014). While most HPV infections are transient and asymptomatic, persistent infections with high-risk HPV types can lead to the development of precancerous lesions and eventually cancer (Schiffman et al., 2007). The virus that causes HPV infection is transmitted through skin-to-skin contact. Most people get a genital HPV infection through direct sexual contact, including vaginal, anal, and oral sex. Signs and symptoms of HPV are not visible in all people since the immune system attacks the virus and clears the HPV infection, typically within two years .While the immune system clears a 3 specific HPV type in body, it does not mean that the person will not be infected with another or the same type of HPV infection. Elissa (2021), the risk factors associated with HPV are primarily related to sexual behavior, including higher numbers of lifetime and recent sex partners. Results of epidemiologic studies are less consistent for other risk factors, including younger age at sexual initiation, higher number of pregnancies, genetic factors, smoking, and lack of circumcision of the male partner. Therefore, people with HPV should be encouraged to accomplish primary prevention through condoms and vaccinations.

In Nigeria, as in other low- and middle-income countries, HPV awareness and preventive practices remain inadequate among young adults, contributing to high burden of HPV-related diseases. In Nigeria, HPV-related cervical cancer is a leading cause of cancer-related deaths among women (Nwabuisi & Odidi, 2019). Limited access to comprehensive sexual education, cultural barriers, and misconceptions about STIs often hinder effective HPV prevention efforts (Ezeonu & Eke, 2017). A virus (HPV) infection remains one of the most prevalent sexually transmitted infections globally, with significant public health implications. HPV is known to be a causative agent for various types of cancers, including cervical, anal, and or pharyngeal cancers, (WHO, 2021). The burden of HPV-related diseases underscores the importance of understanding the knowledge levels, preventive practices, and awareness among young adults, particularly university students who are at a critical stage of sexual and reproductive health development. This study focuses on exploring the knowledge and prevention of HPV among undergraduates at Nnamdi Azikiwe University, Awka, Nigeria, with the aim of informing targeted interventions and health promotion strategies. The university setting provides a unique opportunity to promote public health education and prevention strategies among undergraduates, who are at a critical age for HPV transmission (Adeoye et al., 2018). Nnamdi Azikiwe University (UNIZIK) is no exception, with a large population of undergraduates who require targeted interventions to address HPV-related knowledge gaps and promote preventive behaviors (Okonkwo et al., 2020).
Studies have shown that knowledge and awareness of HPV are low among Nigerian undergraduates (Njoku et al., 2020; Oladepo et al., 2019). This highlights the need for effective public health education programs to promote HPV prevention and control among this population (Ajuwon et al., 2018).

The impact of HPV-related cancers is significant, especially in low- and middle-income countries where access to preventive healthcare services such as HPV vaccination and regular screening is limited (Bruni et al., 2019). Nnamdi Azikiwe University, Awka, provides a

unique setting to investigate the knowledge, practice, and prevention of HPV among undergraduates. As one of the foremost institutions of higher learning in Nigeria, the university hosts a diverse student population from various socio-economic backgrounds and regions across the country. Understanding the baseline knowledge levels, risk perceptions, and preventive practices related to HPV among these students is crucial for designing effective health education programs and targeted interventions.

Moreover, young adults in university settings are at a pivotal stage of sexual development and are likely to engage in behaviors that increase their risk of HPV infection. Addressing gaps in knowledge and promoting preventive behaviors early can potentially reduce the burden of HPV-related diseases in adulthood. By focusing on undergraduates at Nnamdi Azikiwe University, this study aims to contribute empirical data that can inform policy decisions and public health strategies aimed at improving HPV awareness and prevention efforts among young adults in Nigeria.

This study holds significant implications for public health policy and practice in Nigeria. By investigating the knowledge, practice, and prevention of HPV among undergraduate, the findings will contribute to the existing literature on HPV awareness and behaviors among undergraduates in university settings. The results would inform the development of targeted educational campaigns, peer-led initiatives, and campus-wide interventions aimed at promoting HPV vaccination uptake, encouraging regular screening behaviors, and fostering a supportive environment for sexual health discussions among students.

Furthermore, the study aligns with global efforts to reduce the burden of HPV-related diseases through comprehensive vaccination programs and education campaigns. By addressing gaps in knowledge and promoting healthy behaviors early in adulthood, there is potential to mitigate the long-term health and economic impact of HPV-related cancers in Nigeria. This study represents a critical step towards enhancing HPV awareness and promoting preventive behaviors among young adults in Nigeria. By generating evidence-based data and recommendations, this research aims to contribute to the advancement of public health initiatives aimed at reducing the incidence and impact of HPV-related diseases in the university community and beyond.

## Objectives of the Study

The specific objectives of the study were to determine the:
1. level of knowledge of human papilloma virus in promoting public health education among undergraduates' students of Nnamdi Azikiwe University, Awka.
2. health implications of human papilloma virus in promoting public health education among undergraduates' students of Nnamdi Azikiwe University, Awka.
3. preventive strategies of human papilloma virus in promoting public health education among undergraduates' students of Nnamdi Azikiwe University, Awka.

## Research Questions

The following research questions guided this study:
1. What is the level of knowledge of human papilloma virus in promoting public health education among undergraduate students of Nnamdi Azikiwe University, Awka?
2. What are the health implications of human papilloma virus in promoting health education among undergraduate students of Nnamdi Azikiwe University, Awka?

3. What are the preventive strategies of human papilloma virus in promoting health education among undergraduate students of Nnamdi Azikiwe University, Awka?

## Methods

The descriptive survey research design was adopted for this study. The survey research design is defined by Onyeizugbe, (2018) as a research design process that provides a researcher access to survey and study a wide range of population that will enable the researcher to make generalization from the population for the study. The study was carried out in Nnamdi Azikiwe University Awka, Anambra State, which is located in the South East of Nigeria. The population of this study is forty-eight thousand two hundred and seventy (48,270) regular undergraduate students of Nnamdi Azikiwe University Awka, (DAP, 2024), while the sample size of this study is 450 undergraduate students in Unizik.

The researcher used multistage sampling procedure to select the sample size for the study. In the first stage, simple random sampling technique was used to select 5 faculties from the 9 faculties, 2 departments each was selected using purposive sampling technique. An 18- item structured questionnaire was used for this study, the instrument was validated by 3 experts. Kuder-Richardson 20 (K-R 20) was the statistic used to measure the internal consistency of the instrument. The result yielded the coefficient of 0.89. The reliability co-efficient is high enough for the instrument to be considered reliable, as suggested by Olayiwola (2007) that an instrument is considered reliable when its reliability co-efficient is close to one.The reliability of the instrument was done away from the area of study, the instrument was administered using direct delivery method and was collected for analysis. The data collected were arranged by the researcher and the responses were tallied and presented on frequency distribution tables. Percentage was used in answering the questions. Chi-Square statistic was used to test the hypotheses at 0.05 level of significance.

## Results

Table 1: **Percentage of Knowledge of Human Papilloma Virus in Promoting Public Health Education among Undergraduate's Students of Nnamdi Azikiwe University, Awka**

| Knowledge oF HPV | Yes (%) | No (%) |
|---|---|---|
| 1. Do you think STIs only affect certain groups e.g promiscuous individuals? | 230(51.1) | 220(48.9) |
| 2. Is HPV a viral infection? | 400(88.8) | 50(11.1) |
| 3. Can HPV be transmitted through skin to skin contact and sexual activity? | 430(95.5) | 20(4.5) |
| 4. Do you know that HPV can cause cervical cancer? | 350(77.7) | 100(22.2) |
| 5. Are all types of HPV associated with cancer? | 100 (22.2) | 300(66.7) |
| 6. Do you know that HPV can be transmitted through oral sex? | 10(2.22) | 440 (97.7) |

Table 1 shows the frequency and percentage of undergraduate's knowledge of HPV. item 2 shows that high percentage of undergraduate students have knowledge of HPV. item 6 however showed that (2.22%) do not know that HPV can be transmitted through oral sex.

Table 2: **Percentage of Knowledge of the Health Implication of Human Papilloma Virus in Promoting Public Health Education among Undergraduate Students of Nnamdi Azikiwe University, Awka**

| S/N | **Health implications of HPV** | Yes. (%) | No. (%) |
|---|---|---|---|
| 7 | Do you know that HPV can cause infertility? | 150 (33.3) | 250( 55.5) |
| 8 | Do you know that HPV can cause other health problems besides cancer? | 120 (26.7) | 330(73.3) |
| 9 | Do you know that HPV can affect fertility in men and women? | 140 (31.1) | 310(68.9) |
| 10 | Do you know that HPV can affect fertility in men and women? | 110 (24.4) | 340(75.6) |
| 11 | Do you know that men who have sex with men have an increased risk of anal cancer? | 50 (11.1) | 400(88.9) |
| 12 | Do you know that HPV can cause malnutrition? | 105(23.3) | 345(76.7) |

Table 2 shows the frequency and percentage of undergraduates' knowledge on the health implications of human papilloma virus. Item 1 shows that a moderate percentage of (55.5) of undergraduate students have knowledge that HPV causes cancer. Item 11 however showed that (88.9%) do not know that men who sleep with men have an increased risk of anal cancer.

Table 3: **Mean Scores of the Preventive Strategies of Human Papilloma Virus in Promoting Public Health Education among Undergraduate's Students of Nnamdi Azikiwe University, Awka**

| **S/N** | **Items on Preventive Strategies** | $\bar{x}$ | **Mean** |
|---|---|---|---|
| **13** | The use of condoms, dental dams and gloves can reduce transmission risk | 3.80 | **Agree** |
| **14** | Vaccination can help protect against 70-90% of cervical cancer cases | **3.50** | **Agree** |
| **15** | HPV testing for men and women can help prevent and reduce the risk of the infection | **3.80** | **Agree** |
| **16** | Informing adolescents and young adults about HPV risks | **3.70** | **Agree** |
| **17** | Encouraging open discussions about sexual health | **3.00** | **Agree** |
| **18** | Encouraging community-based screening initiatives | **3.80** | **Agree** |

Data in table 3 show that items 13 to 18 which had mean scores of 3.80, 3.50, 3.80, 3.70, 3.00 and 3.80 respectively were accepted by the respondents as preventive strategies of human papilloma virus.

## Discussion

The study aimed at investigating students' knowledge on HPV and strategies that can be used in managing it. Findings indicated that students are to an extent knowledgeable about HPV going by the fact out of the six items listed; they had good knowledge of four. Students are knowledgeable on the fact that it is a viral infection, that it can be transmitted and complications that can arise from HPV. This finding is similar to previous studies. For example, Bosch, (2008) reveals that HPV is a viral disease that can be transmitted through sexual contact including young adults. Furthermore, results in Table 2 also showed that students have poor knowledge of the health implications of HPV. This implies that students could not relate with the health problems that could arise when one contacts HPV, and the grave danger of not taking proactive measures in managing HPV. Adequate knowledge of these health implications can help prevent HPV and reduce transmission risks. According to Ezeonu and Eke (2017), limited access to comprehensive sexual education, cultural barriers, and misconceptions about STIs often hinder effective HPV prevention efforts. Findings of the study revealed the preventive strategies of HPV can reduce the negative impact and even death on the community.

## Conclusion

In conclusion , the study highlights a concerning gap in knowledge about Human Papillomavirus
(HPV) among students. While they recognize HPV as a viral disease, their understanding of its health implications and preventive measures is limited. This knowledge gap underscores the need for comprehensive education and awareness programs to empower students with accurate information about HPV, its risks, and prevention strategies. By addressing these knowledge gaps, we can promote better health outcomes and reduce the burden of HPV-related diseases. The finding to a great extent serve as a base to ascertain the level of knowledge of human papilloma virus as to know its health implications and ways to prevent, so as to reduce the spread of HPV through awareness campaign initiative and sensitization, the researcher therefore recommends that: Students should abstain from smoking because it increases cervical cancer, Students should be encouraged to undergo a pap test every three years, for women aged 21 to 29 and every five years with HPV co-testing for women between 30 to 65. The HPV Vaccination should be recommended for boys and girls aged 11-12, with catch-up vaccines for those up to 26 years should be encouraged. There should be a serious and extensive awareness campaign on the modes of HPV transmission, its presenting symptoms and ways to avoid them. There should be an organized seminar and workshop for educating the religious leaders on basic concepts about HPV and other related health issues. Abstinence should be emphasized Vaccination should be greatly encouraged.

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