



ATTITUDE OF FEMALE STUDENTS IN PUBLIC TERTIARY INSTITUTION IN IMO ABOUT CERVICAL CANCER SCREENING

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ABSTRACT

Cervical cancer is a significant health concern and one of the leading causes of death among women globally. This study aimed to examine the attitudes related to cervical cancer screening among female students in public tertiary institutions in Imo State, Nigeria. The study, guided by three research questions and two null hypotheses tested at the 0.05 significance level used a descriptive survey design. A sample of 900 students was selected from a population of 11,825 female undergraduates. The research instrument, "Attitude towards Cervical Cancer Screening Questionnaire (ACCSQ)" was validated and found reliable with coefficient alphas of 0.89. Data were collected through direct delivery and analysed using SPSS, employing descriptive statistics of mean and standard deviation and inferential statistics of ANOVA. The findings revealed that most students had a positive attitude toward screening, with a mean attitude score of 53.35. Attitudes of the female students of this study towards cervical cancer screening did not significantly differ based on their ages or their level of education. The study recommended that given the generally positive attitude towards cervical cancer screening, awareness campaigns should be strengthened to further encourage screening participation. These campaigns should target all age groups, emphasizing the importance of early detection and regular screening for cervical cancer.

KEYWORDS: Cervical cancer, screening, female students, attitude, public, tertiary institutions

1. INTRODUCTION

Cervical cancer is a serious health issue and the most common genital cancer among women globally, including in Imo State, Nigeria. Despite its preventable nature through screening, many female students in public tertiary institutions in Imo State display a lack of awareness regarding cervical cancer risks and the importance of regular screening. According to the World Health Organization (2020), cervical cancer is the fourth most common cancer in Nigeria, yet many female students are not well informed about preventive measures such as screening, as noted by Nwosu et al. (2012). The absence of comprehensive health education on the subject contributes to negative attitudes towards screening.

Attitudes are fundamental in shaping behaviours, especially in healthcare decisions, including the decision to undergo cervical cancer screening. Bromberger (2015) defines attitudes as psychological orientations that influence individuals' thoughts, feelings, and actions. In the context of cervical cancer screening, a person's attitude towards the procedure directly affects whether they are likely to adhere to screening recommendations. A positive attitude, characterized by beliefs in the necessity, convenience, and health benefits of screening, enhances compliance with screening programs. On the other hand, negative attitudes, which may arise from beliefs that screening is unnecessary, time-consuming, or even dangerous,

often discourage individuals from participating in screening efforts (Dowd & Ahluwalia, 2019).

Attitude development is often shaped by cultural norms, and personal experiences. Studies have shown that women who understand the importance of early detection and the risks associated with cervical cancer are more likely to develop a positive attitude toward screening (Nwosu, Anyaehie, Anyanwu, & Osunkalu, 2012). Furthermore, health education and awareness campaigns can significantly shift negative attitudes to positive ones. For instance, Adebayo, et al. (2017) found that increased health education led to more favorable attitudes towards cervical cancer screening among female tertiary students in Nigeria. This shift is essential in improving screening rates, as demonstrated in studies where positive attitudes correlated with higher screening rates.

Conversely, negative attitudes can be deeply rooted in myths, misconceptions, and a lack of trust in healthcare services. According to Dowd and Ahluwalia (2019), women who viewed cervical cancer screening as unnecessary or feared the procedure were less likely to get screened, even if they had access to services. Negative attitudes may also be influenced by social stigma surrounding cervical cancer screening, particularly in patriarchal societies, where women's health issues may be considered taboo (Okafor et al., 2018).



In the context of female students in Imo State, attitudes towards cervical cancer screening play a pivotal role in determining the success of screening initiatives and overall public health outcomes. Cervical cancer remains a significant health concern globally, especially in Nigeria, where it ranks as one of the most prevalent cancers among women (World Health Organization [WHO], 2020). The fact that it is preventable through regular screening highlights the importance of fostering positive attitudes toward screening, particularly among young women in tertiary institutions.

Young women in public tertiary institutions are at a critical age for cervical cancer prevention, as they are often in the early stages of sexual activity, which places them at increased risk of contracting human papillomavirus (HPV), the leading cause of cervical cancer (Centers for Disease Control and Prevention [CDC], 2021). This age group is, therefore, an ideal target for cervical cancer screening campaigns. However, despite the availability of screening services, participation rates remain low, largely due to negative attitudes and misconceptions about the screening process (Nwosu, Anyaehie, Anyanwu, & Osunkalu, 2012).

Attitudes towards cervical cancer screening are shaped by various factors, including cultural beliefs, level of knowledge, access to healthcare, and the influence of peers and family. For instance, in many communities in Nigeria, cervical cancer screening is shrouded in misconceptions and stigma, leading to a reluctance to undergo testing. Research has shown that some women perceive cervical cancer screening as unnecessary or associate it with promiscuity, further fueling negative attitudes (Okafor, Nwafor, & Igboanugo, 2018). These attitudes can deter students from seeking screening, even when it is available and accessible.

Attitude plays a crucial role in determining whether individuals will likely engage in preventive health behaviours, such as cervical cancer screening. Research shows that women who possess positive attitudes towards screening are more likely to adhere to recommended guidelines (Dowd & Ahluwalia, 2019). These women tend to view screening as necessary, convenient, and beneficial for their health, leading to increased participation in preventive practices. Conversely, women with negative attitudes may perceive screening as unnecessary or burdensome, which reduces their likelihood of undergoing the procedure.

The importance of promoting positive attitudes toward cervical cancer screening cannot be overstated, especially in regions with high cervical cancer prevalence, such as Imo State. According to Igboanugo et al. (2019), cervical cancer is the second most common cancer in the state, yet awareness of the disease and screening remains low. This gap underscores the need for targeted health education initiatives that inform women about the risks and benefits of screening. Klug et al. (2020) emphasize the role of healthcare providers in fostering positive attitudes by educating patients, addressing fears, and providing patient-centred care. Gonzalez-Lorenzo et al. (2020) also point out that making screening more accessible, such as

through flexible appointment times, can help overcome barriers and encourage participation.

Understanding the attitudes of tertiary institution students in Imo State is particularly important as these students represent an educated demographic that could potentially influence broader health behaviours in the community. Studies have shown that socio-demographic factors such as age, education, and socio-economic status significantly affect attitudes toward cervical cancer screening. For example, younger women and those with higher educational attainment are more likely to have positive attitudes and participate in screening (Rao et al., 2020; Ogunlade, Nata, & Ayeni, 2019). This suggests that any intervention aimed at increasing screening rates among students should be tailored to address these diverse backgrounds and perspectives.

Unfortunately, despite the critical importance of early screening in preventing cervical cancer deaths, there is limited research on the attitudes of female students in Imo State's public tertiary institutions toward cervical cancer screening. This lack of data is concerning, as it leaves these young women vulnerable to the risks associated with late-stage diagnosis. Without the right attitudes towards screening, female students may underestimate the importance of regular check-ups or avoid screening out of fear or embarrassment, increasing their risk of developing cervical cancer. Nwabueze et al. (2019) and Oyinlola et al. (2017) note that negative attitudes contribute to low screening uptake, a trend that is evident in many parts of Nigeria and other developing countries.

The dearth of research also hampers public health efforts to design effective interventions. Without sufficient data on the attitudes of students, it becomes challenging to develop evidence-based policies that target this vulnerable group. Therefore, more research is needed to understand the attitudes of female students in Imo State toward cervical cancer screening, particularly in public tertiary institutions. This study is essential for providing the evidence base required to develop cost-effective and impactful interventions aimed at improving screening uptake and ultimately reducing cervical cancer morbidity and mortality in the region.

Statement of the Problem

Cervical cancer is one of the leading causes of mortality among women worldwide, making it a major public health concern (Centres for Disease Control and Prevention, 2019). Despite the availability of screening and preventive treatments, WHO (2020) stated that cervical cancer remains a major problem in many parts of the world. In Imo State, Nigeria, the situation is particularly alarming, with cervical cancer accounting for the highest rate of cancer-related mortality among women in the State. Despite the efforts of the government, Non-Governmental Organisations (NGOs), associations, and other stakeholders, there seemed noticeable increases in the risk of developing cervical cancer, possibly due to attitude of the people leading to late detection and treatment of potential issues.

Despite various scholarly endeavours both within and outside Nigeria, there exists a noticeable dearth of empirical



investigations specifically addressing the attitudes of cervical cancer screening among female students in public tertiary institutions in Imo State. Notably, studies like Okafor, et al. (2018) and Nwabueze, et al. (2019) highlight significant gaps in awareness and engagement with cervical cancer screening among tertiary education students in the region. The current study aims to bridge this gap by empirically exploring the attitudes towards cervical cancer screening among female students in public tertiary institutions in Imo State. The identified gaps in existing literature highlight a critical need for this research to contribute valuable insights and recommendations.

2. PURPOSE OF THE STUDY

The purpose of this study is to determine attitude of female students in public tertiary institution in Imo State about Cervical cancer screening. Specifically, the study determined the:

1. Attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening
2. Attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening based on their ages.
3. Attitudes of female students in public tertiary institutions in Imo State of cervical cancer screening based on their levels of education.

Research Questions

The following research questions guided the study:

1. What are the attitudes of female students in public tertiary institutions in Imo State about cervical cancer screening?
2. What are the attitudes of female students in public tertiary institutions in Imo State about cervical cancer screening based on their ages?
3. What are the attitudes of female students in public tertiary institutions in Imo State about cervical cancer screening based on their level of education?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the attitudes of female students in public tertiary institutions in Imo State about cervical cancer screening based on their ages.
2. There is no significant difference in the attitudes of female students in public tertiary institutions in Imo State about cervical cancer screening based on their level of education.

3. METHODOLOGY

The study adopted a descriptive survey design, which is appropriate for collecting and analysing data from a sample to represent a larger population. This method was chosen to gather opinions on attitude of female undergraduate students in tertiary institutions towards cervical cancer screening. The research was conducted in Imo State, Nigeria, a region with a diverse and significant population of female students in public tertiary institutions, providing a strong foundation for studying cervical cancer screening attitudes.

4. SAMPLING DESIGN

The target population consisted of 11,825 female students from eight tertiary institutions in Imo State, representing universities, polytechnics, and colleges of education. A sample of 900 female students was drawn using a multi-stage sampling method. Institutions were clustered based on type, and students were selected from 36 departments using a random sampling technique.

The instrument for data collection is titled, "Attitude towards Cervical Cancer Screening Questionnaire (ACCSQ)". Attitude towards Cervical Cancer Screening Questionnaire was designed to measure the study participants' attitudes towards cervical cancer screening. It contained 20 items each with 4-point response options of Strongly Agree 4, Agree 3, Disagree 2 and Strongly Disagree 1. The items encompass various subjects pertaining to cervical cancer screening, including understanding of the screening process, the perceived risks linked to cervical cancer, and the perceived advantages of undergoing screening.

The instruments was reviewed by experts to ensure face and content validity. Feedback led to adjustments in the research questions, hypotheses, and response formats. Reliability was tested on a sample of 40 students in Anambra State, yielding high reliability coefficients for attitudes (0.90), confirming the instruments' adequacy.

Statistical design

Data were collected directly from participants using research assistants who distributed questionnaires during lecture sessions. Data were analyzed using SPSS version 23. Descriptive statistics mean and standard deviation, were employed for answering research questions while ANOVA was used for hypothesis testing at a 0.05 significance level.

5. RESULTS

Research Question

What are the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening?

Table 1: Mean Attitude Scores of Female Students in Public Tertiary Institutions in Imo State Towards Cervical Cancer Screening

Variable	n	\bar{x}	SD
Attitude towards Cervical Cancer Screening	832	53.35	5.565



In Table 1, the mean attitude score of the female students towards cervical cancer screening was 53.35. The standard deviation was 5.565, indicating the extent of variability in the students' attitudes around the mean. This indicates that, on average, female students in public tertiary institutions in Imo State had a generally positive attitude towards cervical cancer screening.

Research Question 2

What are the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening based on their ages?

Table 2: Mean Attitude Scores of Female Students in Public Tertiary Institutions in Imo State towards Cervical Cancer Screening Based on their Ages

Age Distribution	n	\bar{x}	SD
17-25 Years	555	53.47	5.611
26 – 34 Years	277	53.10	5.473
Total	832	53.35	5.565

In Table 2, the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening showed a generally positive trend across different age groups. The mean attitude score for students aged 17-25 years was 53.47 with a standard deviation of 5.611, indicating a slightly more positive attitude compared to students aged 26-34 years, who had a mean attitude score of 53.10 with a standard

deviation of 5.473. The overall mean attitude score for all age groups combined was 53.35 with a standard deviation of 5.565.

Research Question 3

What are the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening based on their level of education?

Table 3: Mean Attitude Scores of Female Students in Public Tertiary Institutions in Imo State towards Cervical Cancer Screening Based on their Level of Education

EDUCATION LEVEL	n	\bar{x}	SD
200 Level	377	53.59	5.504
300 Level	316	53.34	5.540
400 Level	139	52.69	5.767
Total	832	53.35	5.565

In Table 3, the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening showed a generally positive trend across different levels of education, with slight variations. Students at the 200 level had the highest mean attitude score of 53.59 with a standard deviation of 5.50, indicating a slightly more positive attitude towards cervical cancer screening. Students at the 300 level have a mean attitude score of 53.34 with a standard deviation of 5.54, showing a similar but slightly lower positive attitude compared to the 200 level. Students at the 400 level had the

lowest mean attitude score of 52.69 with a standard deviation of 5.767, indicating a slightly less positive attitude compared to the other levels. The mean attitude score for all education levels combined was 53.35 with a standard deviation of 5.565.

Hypothesis 1

There is no significant difference in the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening based on their ages.

Table 4: Summary of ANOVA on the Mean Attitude Scores of Female Students in Public Tertiary Institutions in Imo State towards Cervical Cancer Screening Based On their Ages

Source of Variation	SS	df	MS	F	P-value	Remark
Between Groups	24.940	1	24.940	.805	.370	Not significant
Within Groups	25707.368	830	30.973			
Total	25732.308	831				

Table 4 shows that at 0.05 level of significance and 1df numerator and 830df denominator, the ANOVA yielded an F-value of 0.805 with a significance level (p-value) of 0.370, which is greater than the typical threshold of 0.05. Therefore, the fifth null hypothesis was accepted. This indicates that the attitudes of female students towards cervical cancer screening did not significantly differ based on their ages.

Hypothesis 2

There is no significant difference in the attitudes of female students in public tertiary institutions in Imo State towards cervical cancer screening based on their level of education.



Table 5: Summary of ANOVA on the Mean Attitude Scores of Female Students in Public Tertiary Institutions in Imo State towards Cervical Cancer Screening Based on their Level of Education

Source of Variation	Sum of Squares	df	Mean Square	F	P-value.	Remark
Between Groups	82.934	2	41.467	1.340	.262	Not significant
Within Groups	25649.374	829	30.940			
Total	25732.308	831				

Table 5 shows that at 0.05 level of significance and 2df numerator and 829df denominator, the F-value was 1.340, with a p-value of 0.262, which is above the standard significance level of 0.05. The sixth null hypothesis was accepted, indicating that the attitudes towards cervical cancer screening among female students did not significantly vary according to their level of education.

6. DISCUSSION

The finding of the study, which revealed that female students in public tertiary institutions in Imo State had a generally positive attitude towards cervical cancer screening is encouraging and suggests a foundational awareness and openness to the importance of screening. This positive attitude could be attributed to several factors, including the likely increased awareness campaigns, educational programmes, and the influence of health education within these institutions.

Firstly, the positive attitude might stem from the fact that educational efforts that highlight the risks associated with cervical cancer, the role of early detection in improving survival rates, and the availability of screening services could contribute to a more favourable attitudes towards screening. Secondly, the influence of peers and social networks within the academic environment might also play a role. Students who are part of health-related courses or who have friends in such programmes might be more likely to develop positive attitudes towards health behaviours, including cervical cancer screening. The sharing of information and positive reinforcement within these networks could help in shaping a supportive environment that encourages screening.

Furthermore, the generally positive attitude might be a reflective of broader societal changes in Imo State and Nigeria as a whole, where there is a growing recognition of women's health issues and the importance of addressing them. Media campaigns, government initiatives, and non-governmental organizations working to promote women's health could also have contributed to fostering positive attitudes among students. This reflects the impact of health education and likely societal awareness.

The current finding is consistent with previous related studies. For instance, Usman et al. (2023) assessed the knowledge, attitude, and practice of cervical cancer screening among female university students in Ishaka, western Uganda, and found that medical students had a better attitude towards screening compared to their non-medical counterparts ($p = 0.0043$). Similarly, Bekele, et al. (2022) found that a significant proportion (60.1%) of female college students in Dire Dawa City, Ethiopia, exhibited positive attitudes towards cervical

cancer screening, even though the actual screening rates were low. This aligns with the generally positive attitudes observed in the current study. Moreover, Ogwunga, Nwadike, Ahumibe, and Nwakwasi (2021) reported that most female students in four tertiary institutions in Southeast, Nigeria had heard of cervical cancer screening and understood its importance, with 96.2 percent knowing that the human papillomavirus (HPV) was the causative agent, indicating adequate knowledge of screening. However, similar to the current study, the practice of screening was notably low. Similarly, Ojewola, Oridota, Balogun, and Ogundare (2017) found that women in Southwest Nigeria had relatively good attitudes towards cervical cancer screening.

The findings further revealed that students aged 17-25 years have a slightly more positive attitude towards cervical cancer screening. However, the overall mean attitude score suggests that the attitudes of female students towards cervical cancer screening were generally positive across both age groups. The lack of significant difference in attitudes based on age suggests that both younger and older students shared similar perspectives towards the importance and value of cervical cancer screening.

This finding could be attributed to several factors. First, awareness campaigns and educational programmes on cervical cancer screening might have been effective across different age groups within the tertiary institutions, leading to a generally positive attitude among students regardless of age. Additionally, the shared environment and exposure to similar information and peer influence in a tertiary institution could contribute to the homogeneity of attitudes towards health practices like cervical cancer screening. Another possible reason for this lack of significant difference could be related to the common social and cultural backgrounds of the students, where attitudes towards health and preventive care might not vary substantially with age. In many cases, younger and older students may have similar levels of awareness about the risks of cervical cancer and the benefits of early detection through screening, leading to a convergence in their attitudes.

The current finding aligns with previous studies reviewed for this study. For instance, Usman et al. (2023) found that while knowledge and practices of cervical cancer screening varied among female university students in Ishaka, western Uganda, the attitude remained positive across different age groups. Similarly, Bekele, et al. (2022) reported that despite low knowledge and screening practices, the overall attitude towards cervical cancer screening was positive among female college students in Dire Dawa City, Ethiopia. Furthermore, Ogwunga, et al. (2021) found that while knowledge and practice rates were low among female students in South East Nigeria, their attitudes towards cervical cancer screening were predominantly



positive. These studies collectively support the finding that positive attitudes towards cervical cancer screening are consistent across different age groups.

Findings of this study further revealed that attitudes towards cervical cancer screening among female students did not significantly vary based on their levels of education. This pattern might be explained by the heightened awareness and enthusiasm often seen in students at the earlier stages of their tertiary education. 200-level students might be more eager to engage with health-related information and preventive measures, including cervical cancer screening, possibly due to recent campaigns that emphasize the importance of early detection. As students' progress to higher levels, other academic pressures and priorities may begin to overshadow health concerns, leading to a slight decline in their positive attitudes towards screening.

The lack of a significant difference in attitudes across educational levels suggests that while students may start with different levels of enthusiasm, their overall attitudes towards cervical cancer screening remain relatively stable throughout their academic journey. This consistency indicates that factors other than educational level may play a more crucial role in shaping students' attitudes toward cervical cancer screening.

This current finding aligns with several previous studies. For instance, Usman, et al. (2023) found that while knowledge and practice varied significantly based on factors such as age and profession, the attitudes towards cervical cancer screening were generally positive and did not show significant variation based on educational level. This suggests that attitudes towards screening are relatively stable regardless of the students' academic progression. Similarly, the study by Bekele, et al. (2022) in Dire Dawa City, Ethiopia, found that despite differences in knowledge and practice based on the year of study and other factors, attitudes towards cervical cancer screening remained generally positive across different academic levels, indicating no significant variation based on educational level.

Ogwunga, et al. (2021) also found in their research on female students in four tertiary institutions in South East Nigeria that attitudes towards cervical cancer screening did not significantly differ among students based on their academic levels. Although awareness and knowledge might fluctuate, the general attitude towards screening was consistent, reinforcing the idea that educational level does not significantly influence attitudes. These studies collectively support the current findings, suggesting that while knowledge and practice of cervical cancer screening may vary, attitudes towards it remain largely unaffected by the level of education among female students.

7. CONCLUSION

Based on the findings, it can be concluded that female students in public tertiary institutions in Imo State generally hold a positive attitude towards cervical cancer screening. Additionally, age appears to slightly influence attitudes. This suggests that younger students may be slightly more receptive

to cervical cancer screening initiatives, although the difference in attitudes between the two age groups is minimal.

8. RECOMMENDATIONS

Based on these findings, the following recommendations are made:

1. Given the generally positive attitude towards cervical cancer screening, awareness campaigns should be strengthened to further encourage screening participation. These campaigns should target all age groups, emphasizing the importance of early detection and regular screening for cervical cancer.
2. Since students aged 17-25 demonstrated a slightly more positive attitude, specific preventive health programs should be designed to capitalize on their receptiveness. Universities and public health institutions can collaborate to integrate cervical cancer education into orientation programs for younger students.
3. Public tertiary institutions should institutionalize regular health education programs focused on cervical cancer screening. This could include workshops, seminars, and collaborations with healthcare providers to provide easy access to screening services on campuses.
4. Since students in both age groups already show positive attitudes, peer-led initiatives could be beneficial. Female students who have undergone screening could be empowered to serve as ambassadors, encouraging their peers to prioritize cervical cancer screening as part of their health routine.

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