

Sociocultural Factors in Cervical Cancer Screening uptake among Women of Reproductive Age in Kaduna Metropolis, Kaduna State, Nigeria

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Abstract

Cervical cancer remains a significant public health challenge, particularly among women of reproductive age in Kaduna Metropolis, Nigeria. This study investigates the sociocultural factors influencing cervical cancer screening uptake in this demographic. With approximately 500,000 new cases diagnosed annually worldwide, cervical cancer is a leading cause of morbidity and mortality, especially in developing countries. The research identifies key barriers to screening, including lack of awareness, cultural stigmas, and financial constraints, which impede women's health-seeking behaviors. Additionally, the study highlights enablers such as family support, healthcare provider recommendations, and community health programs that can enhance screening participation. Data were collected through a structured survey administered to 400 women across different socioeconomic strata in Kaduna. Findings indicate a generally positive perception of the importance of screening; however, significant gaps in knowledge and persistent fears surrounding the screening process remain. Recommendations emphasize the need for targeted educational campaigns, enhanced community health initiatives, and supportive family networks to improve screening uptake. By addressing these sociocultural factors, the study aims to inform public health strategies that can effectively reduce the incidence of cervical cancer and improve women's health outcomes in Kaduna Metropolis.

Keywords: Cervical Cancer, Kaduna Metropolis, Screening, Sociocultural Factors, Women's Health.

Introduction

Cervical cancer is one of the most common types of cancer in women. The greatest burden of disease is in developing countries, and cervical cancer is often the most common malignancy in women and may account for a quarter of all cancers in women. Approximately 500,000 new cases are diagnosed each year worldwide, mostly in developing countries, and women are often at an inoperable stage of cervical cancer [18, 3]. In the United States, the

American Cancer Society (ACS) published the Cancer Journal for Clinicians, an annual report on cancer screening guidelines in California.

In 2019, there were approximately 12,200 new cases of cervical cancer and 4,210 deaths in the United States [2, 3]. Cancer is one of the leading causes of morbidity and mortality worldwide and is a growing public health problem in developing countries, including Nigeria. Highly virulent human papillomavirus (HPV) infections account for 7.7% of cancer

cases in developing countries, mainly cervical cancer [20, 19].

In sub-Saharan Africa, the disease is on the rise, with more than 75,000 new cases and more than 50,000 deaths each year, and the number of HIV infections is also increasing. Cervical cancer is a major health problem worldwide. More than 560,000 new cases and approximately 275,000 deaths are reported annually, of which more than 80% occur in developing countries [3, 4].

Cervical cancer is the second most common cancer in Nigerian women and the second most common cancer in women aged 15-44. About 3.5% of women in the general population will be infected with HPV-16/18 of the cervix at some point, and 66.9% of cervical cancers are attributed to HPV 16 or 18 [6, 7]. Cervical cancer is a type of cancer that develops in the cells of the cervix, the lower part of the uterus that connects to the vagina. Several strains of sexually transmitted human papillomavirus (HPV) are responsible for most cervical cancers [2, 7]. When exposed to HPV, the body's immune system normally prevents the virus from affecting HPV.

Awareness and knowledge of infections and vaccines drive the demand and use of vaccines. Increased demand could introduce vaccines into national vaccination programs, improving access and affordability of vaccines [2, 20]. Cervical cancer is a disease that affects only women. Therefore, anything that increases a woman's chances of developing a disease is a risk factor.

According to the studies of Munthali, Ngwira, and Taulo, (2015); Murillo, Herrero, Sierra, and Forman, (2016) cervical cancer accounts for about 20% of HPV-related lesions, so HPV is a necessary but not sufficient cause, meaning that people who are not infected with HPV are less likely to develop carcinoma with squamous cells. Vaccination is currently the best option for preventing diseases caused by HPV infection [4, 9]. This is because no treatment has been found that can effectively

control the growth and damage caused by the disease. The prevalence of high-risk HPV types appears to be high among Nigerian women.

Numerous studies have been conducted on cervical cancer in different groups of Nigerian women from different socio-economic strata, but there has been little interest in women living in urban slums. The residents of these slums are disadvantaged in terms of their socio-economic status. They often have limited income, limited health care, lack of nutrition, and lack of awareness of health issues and preventive behavior [7, 19].

Therefore, there is limited information on sociocultural factors in cervical cancer screening uptake among women of reproductive age in Kaduna Metropolis, Nigeria. Therefore, the aim of the study was to determine sociocultural factors in cervical cancer screening uptake among women of reproductive age in Kaduna Metropolis.

The specific objectives are

1. To identify and analyze the sociocultural factors that influence the uptake of cervical cancer screening among women of reproductive age in Kaduna Metropolis.
2. To assess the barriers and facilitators affecting women's willingness to participate in cervical cancer screening programs in Kaduna Metropolis.

Materials and Methods

The study research design for the study was survey research design. The study population consists of residences in the Kaduna State metropolitan area, and the population assumes a growth rate of 2.8% to extrapolate the study population estimated in the 2006 census. The investigation concerns local authorities, which are part of Kaduna Metropolitan State; Kaduna North, Kaduna South, Igabi and Chikun Local Government Areas. The population is Kaduna North 646,213; South Kaduna 638,580; Igabi 690,391 and Chikun 590.9 The total population of Kaduna North, Kaduna South, Igabi and

Chikun Local Government Areas is 2,566,118 people [16].

The sample size of the study was determined through the use of sample size formula of Krecjie and Morgan (1970);

Sample size formula for arriving at a finite population is;

$$S = \frac{x^2 NP(1 - P)}{d^2(N - 1) + x^2 P(1 - P)}$$

Where;

S = required sample size

X = z value (e.g. 1.96 for 95% confidence level)

N = population size

P = population proportion (expressed in decimal) (assumed to be 0.5) 50%

d = degree of accuracy (5%) expressed as a portion (0.5); it is margin of error.

$$S = \frac{1.96^2 \times 2,566,118 \times 0.5(1-0.5)}{0.05^2(2,566,118-1)+1.96^2 0.5(1-0.5)}$$

$$S = 384$$

Proportional allocation was also use for each stratum using ratio and thus ensuring that each stratum or local government is appropriately represented. However, 400 questionnaires were distributed in order to gain a more accurate and systematic information. The questionnaires were administered by researchers or research assistants. For this study, data was obtained from primary sources. A 5-point Likert scale is used in the Perceived Sensitivity section. The Likert scale is used to indicate how often people agree or disagree with a certain statement [3, 4].

The 5-point Likert scale is a type of psychometric response scale that indicates the respondent's level of agreement with a statement, usually on a 5-point scale:

1. Strongly Disagree
2. Disagree
3. Neither Agree nor Disagree
4. Agree
5. Strongly Agree [7, 9].

The descriptive analysis method was be used for the data generated for the study. Collected data is analyzed with chi-square, percentages, and frequency from SPSS version 23.0.

Results

This study assessed the sociocultural factors in cervical cancer screening uptake among women of reproductive age in Kaduna Metropolis. The data analysis shows the distribution of demographic factors and respondents' responses. A total number of 400 questionnaires were administered to the respondents under study and out of the 400 questionnaires administered, 385 were filled and returned. This is 96.25% rate of response.

Demographic Characteristics

The demographic data presented in Table 1 reveals critical insights into the population of women surveyed in Kaduna Metropolis. The sample consisted of 385 respondents, highlighting a diverse age range, educational background, and employment status.

Table 1. Demographic Characteristics of Respondents

Variable	Frequency (n=385)	Percentage (%)
Age		
18-24	60	15.6
25-34	130	33.8
35-44	105	27.3
45-49	90	23.4
Educational Level		
No formal education	50	13.0
Primary education	100	26.0
Secondary education	150	39.0

Tertiary education	85	22.0
Employment Status		
Employed	200	52.0
Unemployed	185	48.0

Source: Field Survey, 2024

Table 1. revealed that the majority of respondents fell within the 25-34 age group (33.8%), followed by 35-44 (27.3%) and 45-49 (23.4%). This distribution underscores the importance of targeting screening programs towards women in their reproductive years, as cervical cancer typically affects women within these age brackets. The lower representation of younger women (18-24) may suggest a lack of awareness or prioritization for screening in this age group, which warrants further investigation. The educational attainment of respondents varied, with 39% having secondary education and 22% attaining tertiary education. Notably, a significant portion (13%) had no formal education. This distribution is crucial, as educational level is a strong predictor of health literacy. Women with higher education levels tend to have better understanding and awareness of health issues, including cervical cancer and its prevention. The findings correlate with previous research indicating that

educational interventions can significantly improve screening rates [9, 11].

Employment status revealed that a majority (52%) of respondents were employed, while 48% were unemployed. This finding suggests that economic factors could influence access to screening services, as employed women may have better access to healthcare resources. However, the high unemployment rate also indicates a significant portion of the population that may struggle to afford screening, thus highlighting the need for subsidized healthcare services.

Perceived Importance of Screening

Table 2 illustrates the participants' perceptions regarding the importance of cervical cancer screening. The majority of respondents acknowledged the significance of screening for early detection and preventive measures.

Table 2. Perceived Importance of Cervical Cancer Screening

Statement	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)
Screening is important for early detection	55.6	31.9	1.3	2.9
Regular screening can prevent cervical cancer	57.1	40.3	1.8	3.9
I believe I need to get screened	48.6	35.0	10.0	6.4

Source: Field Survey, 2024

Table 2. revealed an overwhelming 55.6% agreed that screening is important for early detection, and 57.1% recognized that regular screening can prevent cervical cancer. This positive perception is promising and indicates that educational campaigns focused on increasing awareness have had some success.

However, a notable segment (48.6%) expressed a personal belief in the need for screening, which could suggest gaps in individual understanding or misconceptions about personal risk factors. The findings suggest that while awareness exists, further education is necessary to translate understanding into

action. Campaigns that emphasize personal risk, the benefits of early detection, and the availability of screening services could enhance participation rates. Leveraging the positive attitudes towards screening can be pivotal in designing effective health promotion strategies.

Barriers to Screening

Table 3 presents significant barriers that hinder cervical cancer screening, with fear of procedures and lack of information being prominent concerns.

Table 3. Identified Barriers to Cervical Cancer Screening

Barrier	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)
Fear of procedures	61.0	7.8	9.4	4.2
Cultural beliefs against screening	57.7	12.0	15.0	5.3
Lack of information	66.8	10.5	8.0	4.7

Source: Field Survey, 2024

Table 3 revealed with 61% of respondents agreeing that fear of procedures inhibits their willingness to seek screening, this barrier is substantial. Fear can arise from anxiety about the medical process, potential pain, or negative outcomes. Past studies have similarly identified fear as a critical barrier, suggesting that addressing these anxieties through education and supportive counseling could be beneficial [20, 21]. Also, cultural beliefs also play a critical role, with 57.7% of participants acknowledging that cultural stigmas against screening affect their decisions. In many societies, discussions around reproductive health are taboo, leading to misconceptions about cervical cancer and its screening. This finding supports literature indicating that

cultural sensitivities significantly impact health-seeking behaviors [23, 22].

Finally, a striking 66.8% of respondents reported a lack of information as a barrier. This emphasizes the need for comprehensive educational initiatives that effectively communicate the importance of cervical cancer screening and dispel myths surrounding it. The evidence suggests that improving health literacy can empower women to seek necessary services and reduce fear associated with screening [5, 6].

Enablers of Screening

Table 4 outlines factors that encourage cervical cancer screening uptake, revealing the importance of support systems.

Table 4. Factors Enhancing Screening Uptake

Enabler	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)
Family support	70.0	15.0	10.0	5.0
Provider recommendations	65.0	20.0	10.0	5.0
Community health programs	75.0	10.0	10.0	5.0

Source: Field Survey, 2024

Table 4 revealed a significant 70% of respondents indicated that family support enhances their likelihood of participating in screening. This finding aligns with existing literature that emphasizes the role of social networks in health behaviors. When family members advocate for health-seeking behaviors, women are more likely to pursue screening [8, 9]. Healthcare provider recommendations were also noted as an enabler, with 65% of respondents agreeing on its importance. Trust in healthcare providers can significantly influence health decisions, and providers who actively promote screening can help alleviate fears and misconceptions [15, 21].

The role of community health programs emerged as a crucial factor, with 75% of participants recognizing their importance. These programs can serve as platforms for education, providing accessible information and resources to women in targeted communities. Integrating screening services into these community initiatives can increase accessibility and participation rates [8, 12].

Discussion of Findings

The findings from this study resonate with existing literature on cervical cancer screening barriers and enablers in various contexts. Research consistently highlights that sociocultural factors significantly shape health-related behaviors, particularly in developing regions. For instance, [20, 21] found that cultural stigmas surrounding reproductive health deter women from seeking necessary screenings. Similarly, [2, 4] emphasized the correlation between education levels and awareness of cervical cancer, suggesting that targeted educational efforts could bridge knowledge gaps.

Moreover, studies such as those by [12, 17] and [20, 22] reinforce the importance of community engagement and family support in enhancing screening uptake. Their findings suggest that community health workers and

local leaders play pivotal roles in promoting health education and access to services. The barriers identified in this study reflect broader trends in healthcare access, particularly in low-resource settings. Fear, cultural beliefs, and lack of information are common impediments noted in various studies across Africa and beyond, indicating a need for tailored interventions that consider local contexts and cultural sensitivities [24].

To develop targeted educational campaigns that address specific misconceptions about cervical cancer and its screening. These interventions should utilize culturally sensitive messaging and community engagement strategies to reach women effectively. The study states that community health programs should be strengthened so that it can provide accessible information and resources. Integrating cervical cancer screening services within these programs can enhance participation rates and ensure that women receive the necessary support.

The study states that the family members and social networks should encourage and advocate for cervical cancer screening. Programs that facilitate discussions about reproductive health within families can help normalize screening behaviors and reduce stigma. The study states that training should be offered to healthcare providers to equip them with the necessary skills to communicate the importance of cervical cancer screening empathetically. Providers should be encouraged to foster trust and rapport with patients, enabling open discussions about fears and concerns.

Conclusion

This study effectively highlights the sociocultural factors influencing cervical cancer screening uptake among women of reproductive age in Kaduna Metropolis. The demographic characteristics of the respondents reveal a diverse population, with significant variations in education and employment status that correlate with screening behaviors. The

perceived importance of screening is generally positive, yet substantial barriers such as fear of procedures, cultural beliefs, and lack of information persist.

Competing Interests

The Authors declared no known competing interests.

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