

Pattern of Utilization of Cervical Cancer Screening Services among Female Sex Workers in Some Selected Brothels in Abuja, Nigeria

Rose Ekama Ilesanmi¹, Dayo Ruth Kehinde²

¹Department of Nursing, University of Ibadan, Ibadan, Oyo State, Nigeria, ²Federal Capital Territory School of Nursing, Gwagwalada, Abuja-FCT, Nigeria



Corresponding author: Dayo Ruth Kehinde, RN, MSc

Federal Capital Territory School of Nursing, Gwagwalada, Abuja-FCT, Nigeria

Tel: +2348035649781

E-mail: dayosatoye@gmail.com

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ABSTRACT

Objective: The utilization of cervical cancer screening services remains low among Female Sex Workers (FSWs) in Sub-Saharan Africa, with few or no studies conducted in Nigeria. However, the prevalence of human papillomavirus in this population is reportedly high because of associated risk factors. This study examined the pattern of cervical cancer screening service utilizations among FSWS in the Abuja metropolis.

Methods: This descriptive cross-sectional survey used a purposive sampling technique to select 406 respondents via a structured questionnaire including questions regarding whether they had been screened for cervical cancer, the frequency of screening and type of screening method. Data were analyzed using SPSS version 22 and presented using frequency tables and percentages. **Results:** The response rate among the participants was 97.6%. The mean age of the FSWS was 32 ± 5.1 years. Regarding the pattern of screening age, the mean age at the first screening was 28 ± 4.3 years. Only

81 (20%) participants had been screened annually, and visual inspection with acetic acid was most frequently used (20.9%). Respondents preferred to undergo screening in their brothels. The awareness of screening services was high ($n = 290, 71.4\%$); however, the utilization of cervical cancer screening services remained low, as 246 (60.6%) FSWS had never been screened. The nonutilization of screening services was related to poor accessibility and a lack of awareness and interest. **Conclusions:** Although a high level of awareness that would be expected to influence uptake, cervical cancer screening services were rather underutilized by the study respondents. Therefore, a concerted effort is needed to ensure that FSWS understand cervical cancer and its consequences. Hopefully, this effort will improve the uptake.

Key words: Cervical cancer, female sex workers, screening, utilization

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Introduction

Cervical cancer is the fourth most common cancer in women, with 528,000 new cases diagnosed worldwide in 2012.^[1] In less developed regions, cervical cancer is the second most common cancer in women, with an estimated 445,000 new cases in 2012.^[2] These latter cases accounted for 84% of the new cases of cervical cancer worldwide.^[2]

In Nigeria, an estimated 47.72 million women aged 15 years and older are at risk of developing cervical cancer.^[3] Approximately 14,000 Nigerian women are newly diagnosed with cervical cancer and 8000 die from the disease every year.^[4]

A report of the national incidence of cervical cancer, which was based on statistics derived from the Abuja and Enugu population-based cancer registries from 2012 to 2013, demonstrated that cervical cancer is the second most common cancer affecting women in Nigeria. In that study, 290 cases were reported, with age-standardized incidence rate of 31.2/100,000.^[5]

Most cervical cancers are caused by the human papillomavirus (HPV), which is transmitted through sexual contact.^[6] HPV 16 and HPV 18 are strains known to be responsible for approximately 70% of all cases of cervical cancer and are usually asymptomatic.^[6]

As female sex workers (FSWs) face the dual risks and burdens of both HPV and HIV infection, cervical cancer screening and treatment for cervical intraepithelial neoplasia should be provided to all FSWs. Studies have indicated that multiple sexual partners may increase a person's risk of HPV transmission. In a study of Hungarian FSWs, a great majority (82.4%) harbored detectable levels of HPV deoxyribonucleic acid compared with 46.2% of the general female population ($P < 0.05$).^[7] Thus, FSWs may face a greater risk of infection, compared to the general population.^[8] FSWs also have an elevated HPV risk factor level, which is related to the inconsistent use of personal protective barriers (e.g. condoms). Other risk factors for HPV infection include multiple sexual partners, a higher number of sexual partners, HIV infection,^[9] and the use of nonbarrier contraception.^[10] Younger age and the number of years performing sex work have been also associated with an increased risk of HPV infection among FSWs.^[11]

A study of the barriers to HIV and sexual and reproductive healthcare in Tete, Mozambique reported that cervical screening services are underutilized by FSWs.^[12] None of the 311 FSWs enrolled, in that study, had ever utilized cervical cancer screening services.^[12] Similarly, a report of a systematic review of the facility-based sexual and reproductive health services for FSWs in Africa discovered that often the, broader sexual reproductive health needs of FSWs, such as cervical cancer screening, are ignored.^[13]

The barriers to screening service utilization identified in previous studies range from language issues to not receiving Pap smear test results, as reported by 611 FSWs.^[14] Other barriers include a poor reception by staff, stigmatization and lack of confidentiality, as reported in a survey on the barriers to sexual and reproductive health services administered to 311 FSWs in Tete, Mozambique in 2016.^[12] Inadequate knowledge of HPV and cervical cancer was also identified as a barrier among FSWs.^[15]

In Nigeria where the present study was performed, a literature search revealed a complete dearth of studies on the utilization of cervical cancer screening services among FSWs, even though this population has been highlighted as a priority group for cervical cancer prevention efforts. Hence, this study aimed to investigate the pattern of cervical cancer screening utilization among FSWs.

Methods

Study design

This quantitative study utilized descriptive cross-sectional methodology.

Study setting

The study was conducted in the Bwari Area Council of the Federal Capital Territory (FCT) in Abuja. The Bwari Area Council is one of six area councils in Abuja. It is located in the northeastern part of the FCT in Abuja. This area council can be accessed from the Abuja-Kubwa Expressway.

Bwari comprises several diverse ethnic groups, such as the Gbagyi, Koro, Fulani and other minority migrants. People who live in Bwari are predominantly farmers who reside in sparsely populated settlements; this study included the brothels in this area.

Study population

The study population included all FSWs in the Bwari Area Council of Abuja. This population included all FSWs who had worked in the industry for more than 6 months from 19 to 45 years. FSWs at brothels who were likely to be new to the industry (<6 months of work) were not included in the study.

Sample size determination

A sample size calculation for a population of fewer than 10,000 subjects was used.^[16] In a previous study on the knowledge, attitudes, and practices regarding cervical cancer screening among market women in Zaria, Nigeria,^[17] a total sample size of 416 respondents were enrolled, but only 406 questionnaires were retrieved. The unretrieved questionnaires were torn and discarded by aggressive respondents who believed that they might be prosecuted.

Sampling technique

Multistage sampling was used to select the area council, brothels, and respondents. The Abuja FCT comprises six area councils, of which Bwari Area Council was randomly selected by balloting; next, 10 of the mapped brothels in this area were randomly selected.

The respondents were selected from the 10 brothels using purposive sampling, and all FSWs who met the inclusion criteria were available during the data collection period and were willing to participate in the study were selected. Randomization of the respondents was not possible because the participants would be less accessible and the method would not be publicly accepted.

Instrument development

An interviewer-administered structured questionnaire was used for data collection. The questionnaire was developed based on an extensive literature search and the stated problem as identified by the researcher. This questionnaire was designed to elicit information that would achieve the objectives of the study.

Reliability of the instrument

A pilot study was conducted in a brothel in the Abuja Municipal Area Council, another local government outside of the study setting in the Abuja FCT. The reliability coefficient (Cronbach's Alpha) of the research instrument was 0.8.

Ethical approval

The researcher obtained a letter of introduction from the Department that had been addressed to the Federal Health Research Ethics committee, FCT Abuja. This letter was used to obtain ethical approval.

Permission to conduct research on the premises was also obtained from the managers of the selected brothels.

Once approval was received, eligible FSWs at these brothels were invited to participate. Participation was completely voluntary and began after informed consent had been obtained and the consent forms were signed by the participants.

No harm was done to any of the participants. Each participant benefitted from the study, as the subject increased their awareness of belonging to a high-risk group for cervical cancer and emphasized the need to utilize cervical cancer screening services. This work aims to enhance the early detection of cervical cancer and initiation of appropriate treatment.

The participants' consent forms and questionnaires were kept under lock and key and coded properly, and any means of identification in any form was jettisoned.

Data collection

The interviewer-administered structured questionnaire was administered individually to each respondent and was completed and retrieved on the same day. This procedure was conducted within a 4-week period with assistance from four of the FSWs.

Statistical analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows, version 22 (IBM, Armonk, NY, USA). The findings are presented in tables and as percentages.

Results

A total of 416 questionnaires were administered to FSWs; of these, 406 were retrieved and found to be suitable for data analysis. Accordingly, the response rate was 97.6%.

Table 1 shows that the mean age of the FSWs was 32 ± 5.1 years, with age range of 19–45 years.

Table 1: Sociodemographic characteristics of the participants

Sociodemographic of participants	Participants, n (%)
Age group (years)	
19-29	121 (29.8)
30-39	252 (62.1)
40-45	33 (8.1)
Mean \pm SD	32 \pm 5.1
Level of education	
Primary 6	188 (46.3)
SSCE	141 (34.7)
OND	14 (3.4)
No education	63 (15.5)
Religion	
Christianity	342 (84.2)
Islamic	42 (10.3)
Not definite	22 (5.4)
Marital status	
Married	27 (6.7)
Single	154 (37.9)
Cohabiting	49 (12.1)
Separated	150 (36.9)
Widow	26 (6.4)
Geo political zones	
North Central	265 (65.3)
South West	49 (12.1)
South East	58 (14.3)
South South	27 (6.7)
North West	7 (1.7)
Monthly income	
10,000-49,000	74 (18.2)
50,000-89,000	246 (60.6)
90,000-129,000	83 (20.4)
130,000-150,000	3 (0.7)

Approximately, 342 (84.2%) reported that they practiced Christianity, while the remainder practiced Islam. Sixty-three FSWs (15.5%) had no formal education. The others had levels of formal education ranging from primary six to an ordinary national diploma. One hundred and fifty-four (37.9%) of the participants were single, while 150 (36.9%) were separated from their spouses. In addition, 49 (12.1%) were cohabiting with male partners. The median monthly income of the participants was 70,000 naira.

Table 2 shows that of the 406 participants, 290 (71.4%) were aware of cervical cancer screening services, but only 158 (38.9%) had utilized these services.

As shown in Table 3, the mean age of the participants at the first cervical cancer screening was 28 ± 4.3 years.

As shown in Table 4, 81 participants (20.0%) underwent yearly screening.

Figure 1 shows that the two major reasons stated for not utilizing cervical cancer screening services were lack of interest and lack of awareness; however, the majority gave no reason to support their actions.

Discussion

The sociodemographic information presented in this study shows that the participants were all within the age range suitable for the utilization of cervical cancer screening services, as recommended by the American Cancer Society.^[18] This finding suggests that all the FSWs should be involved and participate actively in the utilization of cervical cancer screening services.

Furthermore, more than half of the respondents had never undergone cervical cancer screening. This is consistent with the findings of a study of 311 FSWs in Tete, Mozambique.^[12] In that previous study, the authors

reported that none of the participants had been screened for cervical cancer. These results suggest the inadequate utilization of screening services and indicate the urgent need to implement interventions that would improve utilization.

In addition, awareness of screening has been hypothesized to influence uptake. However, this hypothesis did not hold

Table 2: Awareness and utilization of cervical cancer screening services

Awareness and utilization	Participants [n (%)]
Awareness	
Aware of screening services	290 (71.4)
Never heard	116 (28.6)
Total	406 (100.0)
Utilization	
Screened	158 (38.9)
Never screened	248 (61.1)
Total	406 (100.0)

Table 3: Age of participants during the first cervical cancer screening

Age of participants at first screening	Participants [n (%)]
19-29 years	45 (11.1)
30-39 years	85 (20.9)
40-45 years	12 (3.0)
Never screened	248 (61.1)
Age unknown	16 (3.9)
Total	406 (100.0)

Table 4: Pattern of cervical screening among participants

Pattern of cervical screening	Participants [n (%)]
Types of screening methods	
VIA	85 (20.9)
VILI	22 (5.4)
Pap smear	43 (10.6)
Not applicable	248 (61.1)
I don't know	8 (2.0)
Frequency of cervical cancer screening	
Never	248 (61.1)
Yearly	81 (20.0)
Once	53 (13.1)
Did not disclose	24 (5.9)
Periods of last cervical cancer screening	
2014	2 (0.5)
2015	8 (2.0)
2016	59 (14.5)
2017	69 (17.0)
Never screened or did not specify the year of screening	268 (66.0)
Accessibility to results of screening	
Received results of screening	144 (35.5)
Did not receive results of screening	8 (2.0)
Never screened	248 (61.1)
Did not indicate receipt of results of screening	6 (1.5)

VIA: Visual inspection with acetic acid, VILI: Visual inspection with Lugol's iodine

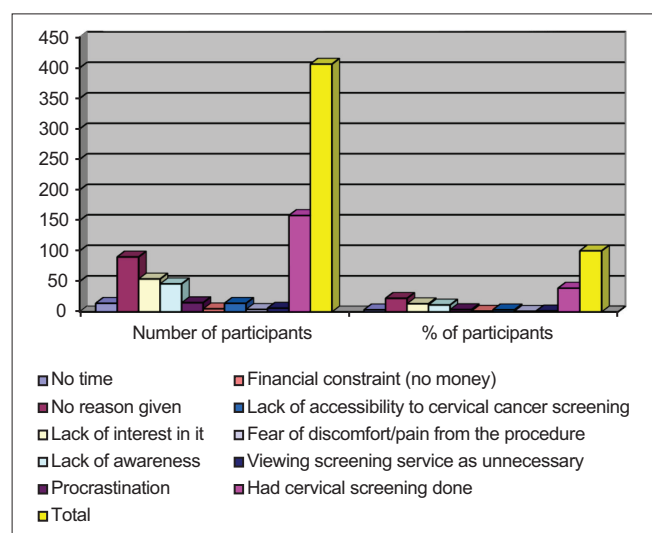


Figure 1: Respondents' reasons for poor uptake of screening

true among the present study participants. The reasons cited for the low uptake of screening services among participants in the current study ranged from a lack of interest and time and procrastination to a lack of accessibility, although the majority gave no particular reason. Possibly, although the respondents are aware of cervical cancer screening services, they may not be sufficiently knowledgeable about the subject. This possibility suggests the need for an educational intervention program to provide adequate knowledge, which would likely increase the uptake of screening services.

As noted, we examined the most common reason for the nonutilization of screening services cited by respondents, which included the lack of interest, awareness, and accessibility. This finding suggests that screening services should be emphasized and made accessible to all FSW at an affordable cost. Health educational interventions are also important to provide FSWs with a good concept of what cervical cancer screening services entail. This information will help to improve utilization.

Despite the aforementioned points, the few respondents who utilized the screening services in this study had a mean age of 28 ± 4.3 years at the first screening. The majority underwent screening in the brothels where they reside and work. This was consistent with the findings from a study on the self-reported experiences of health services among female street-based prostitutes. That study reported that FSWs preferred to use services with extended operating hours located closer to where they worked.^[19] This suggests that providing screening services to FSWs in their brothels would greatly help to improve the uptake and ease of access by allowing FSWs to make themselves available for the screening services.

The screening methods used by the respondents in this study included visual inspection with acetic acid (VIA), visual inspection with Lugol's iodine (VILI) and Pap smear. This finding is consistent with a previous study in which all the above methods were applied to FSWs.^[20] VIA was the most frequently reported method in this study, consistent with a report that VIA and VILI screening tests were found to be more sensitive than cytology analyses in many studies conducted in developing regions.^[21] This finding implies that VIA is an appropriate method for cervical cancer screening in FSWs.

An analysis of the frequency of screening service utilization among the respondents who reported such utilization revealed that more than half used these services annually. This is consistent with the screening guideline for women as recommended by the American Cancer Society. This Society suggests that women at high risk of cervical cancer should be screened more often than other women. This finding suggests that the screened respondents screened

are adhering appropriately to the screening guidelines. Therefore, FSWs should be encouraged to utilize these services often and to encourage others to adhere to the recommendation.

Limitations

Participant recruitment was time-consuming, given the clandestine nature of the work, and it was difficult and financially demanding to gain access to the respondents. As a result, the study was not extended to other local governments in the state.

In addition, randomization was not possible because of the difficulties in gaining access to respondents. The respondents were afraid of prosecution because of the illegality of their work.

Conclusion

This study has shown that the utilization of cervical cancer screening services remains low among FSWs, despite a high level of awareness of screening services. This low utilization rate may be attributed to a lack of understanding of the nature of cervical cancer and its consequences. To ensure that FSWs optimally utilize cervical cancer services, governments and policymakers should include FSWs in various health programs focused on sexual reproductive health planning which would improve the utilization of screening services and thereby reduce the burden of cervical cancer in Nigeria. Health practitioners need to educate and orientate FSWs about cervical cancer. In addition, health workers need to actively engage in targeted awareness programs for this high-risk group by bringing these programs to the places where they live and work; in order words, they should bring cervical screening services to the FSWs' doorsteps to enhance accessibility.

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Conflicts of interest

There are no conflicts of interest.

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