

ORIGINAL RESEARCH ARTICLE

Predictors of cervical cancer screening service utilization among female health care workers in a tertiary hospital in Osogbo, Osun State

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Abstract

Cervical cancer is the second commonest cancer in Nigerian women that can be reduced through effective screening. This study aimed to determine the utilization of cervical cancer screening services among female health care workers in a tertiary hospital. It is a descriptive cross-sectional study that utilized a pretested questionnaire to collect data from 170 respondents. Data were analyzed using descriptive statistics and logistic regression. 61.2% had good knowledge about cervical cancer, and 75.3% reported utilization of cervical cancer screening services. Factors that affect utilization of cervical cancer screening services are fear of negative results (82.4%), lack of time (78.2%), cost of screening (63.5%), and support from husband (61.2%). Logistic regression analysis showed that age ($\beta = 4.009$, $p < 0.001$), year of experience ($\beta = -4.350$, $p < 0.001$), fear of negative results ($\beta = -2.479$, $p = 0.014$) and lack of support from husband ($\beta = 4.380$, $p < 0.001$) significantly predict utilization of screening services. Conclusively, female health workers know about the prevention of cervical cancer and are willing to utilize screening. It is recommended that cervical cancer screening should be made mandatory for female health care workers, to reduce the incidence of cervical cancer cases. (*Afr J Reprod Health 2022; 26[10]: 94-100*).

Keywords: Cervical cancer, utilization, cervical cancer screening, female health care workers

Résumé

Le cancer du col de l'utérus est le deuxième cancer le plus fréquent chez les femmes nigérianes qui peut être réduit grâce à un dépistage efficace. Cette étude visait à déterminer l'utilisation des services de dépistage du cancer du col de l'utérus chez les travailleuses de la santé dans un hôpital tertiaire. Il s'agit d'une étude transversale descriptive qui a utilisé un questionnaire prétesté pour recueillir des données auprès de 170 répondants. Les données ont été analysées à l'aide de statistiques descriptives et d'une régression logistique. 61,2 % avaient de bonnes connaissances sur le cancer du col de l'utérus et 75,3 % ont déclaré avoir utilisé les services de dépistage du cancer du col de l'utérus. Les facteurs qui affectent l'utilisation des services de dépistage du cancer du col de l'utérus sont la peur des résultats négatifs (82,4 %), le manque de temps (78,2 %), le coût du dépistage (63,5 %) et le soutien du mari (61,2 %). L'analyse de régression logistique a montré que l'âge ($\beta = 4,009$, $p < 0,001$), l'année d'expérience ($\beta = -4,350$, $p < 0,001$), la peur des résultats négatifs ($\beta = -2,479$, $p = 0,014$) et le manque de soutien de la part mari ($\beta = 4,380$, $p < 0,001$) prédisent de manière significative l'utilisation des services de dépistage. En conclusion, les agents de santé féminins connaissent la prévention du cancer du col de l'utérus et sont disposés à utiliser le dépistage. Il est recommandé que le dépistage du cancer du col de l'utérus soit rendu obligatoire pour les travailleuses de la santé, afin de réduire l'incidence des cas de cancer du col de l'utérus. (*Afr J Reprod Health 2022; 26[10]: 94-100*).

Mots-clés: Cancer du col de l'utérus, utilisation, dépistage du cancer du col de l'utérus, travailleuses de la santé

Introduction

Cervical cancer is the fourth most common cancer in women worldwide, coming after breast cancer,

colorectal cancer, and lung cancer with approximately 570000 cases of cervical cancer occurring in 2018 compared to an estimated 528,000 cases in 2012^{1,2}. Approximately 90% of

deaths from the disease occurred in low- and middle-income countries³. Cancer of the cervix is the second commonest cancer in Nigerian women and the leading gynecological malignancy with high mortality among the afflicted⁴. Nigeria has a population of 50.33 million women aged 15 years and older who are at risk of developing cervical cancer⁵. The high mortality rate from cervical cancer globally could be reduced through a comprehensive approach that includes prevention, early diagnosis, effective screening, and treatment programs⁶. According to a study, cervical cancer is one of the most preventable human cancers because of its slow progression, cytological identifiable precursors, and effective treatments if detected earlier⁷. Cervical cancer screening has been consistently shown to be effective in reducing the occurrence of new cases of cervical cancer and mortality related to the disease⁸.

Presently, screening technologies available in Nigeria are Papanicolaou (Pap) smear test, cervical biopsy, human papillomavirus DNA test, and visual inspection with acetic acid, all of which have been proven to be effective⁵. Evidence showed that the uptake of cervical cancer screening is still poor in Nigeria. In a study on predictors of cervical cancer screening among nurses in Ogbomoso, less than half (30%) of the respondents have ever undergone cervical cancer screening⁹. In another study on factors Influencing Uptake of Cervical Cancer Screening among Female Health Workers at the University of Port Harcourt Teaching Hospital, Rivers State, only 34.6% of the respondents had made use of cervical cancer screening services in the past¹⁰. This is so despite an appreciable level of knowledge of cervical cancer screening among the population. For instance, previous studies among female health workers found good knowledge of cervical cancer screening health workers, with attendance poor rates of uptake of the screening^{8,11}. Female health workers play a major role in promoting health care services and in enlightening the public on many health-related issues to gain and promote patients' uptake of care and improve their confidence, however, most of them are not making use of cervical screening services¹¹. Although there has not been any reported case of female health care professional's deaths associated with lack of uptake of cervical cancer screening in the study site, but previous studies have proved beyond reasonable doubt that there is significantly low uptake of

screening services among health care workers⁹⁻¹¹. Health care professionals' advice and encouragement mostly have a positive impact in encouraging utilization of preventive health care services. In addition, health care professionals are expected to teach by example when discharging their responsibilities, this is in contrast to what has been observed among these professionals. The poor uptake of cervical cancer screening has been associated with several factors. These include lack of facilities, financial status, lack of awareness, inconvenient screening time, level of education, and lack of support from husband^{11,12}. The researcher observed that there is a dearth of studies on the predictors of utilization of cervical cancer screening among health workers in Nigeria, particularly in the researcher's part of the country. Therefore, this study aimed at assessing the predictors of cervical cancer screening among health workers in tertiary hospitals in Osogbo, Osun State, Nigeria.

Methods

Study design

The study utilized a descriptive cross-sectional design to determine the predictors of cervical cancer screening services among female health workers in Osun State University Teaching Hospital, Osogbo. The hospital was initially founded as a general hospital in 1960 and was upgraded to a teaching hospital with the establishment of a university in the state in 1996. Facilities for cervical cancer screening are available in the hospital without any restriction to its use by the staff.

Sampling

A total of one hundred and seventy female health workers were drawn from the study setting. The sample size was calculated with the use of the formula for descriptive studies by the Taro Yamane formula. All the female healthcare workers were eligible for inclusion in the study, while healthcare workers who are not present at the time of data collection and those that refused to give their consent were excluded from the study. A proportionate sampling technique was adopted for this study.

Data collection

Data collection was done over six weeks period with the use of a structured questionnaire that was used to elicit information on the sociodemographic characteristics of participants, their knowledge of cervical cancer and cervical cancer screening, utilization of cervical cancer screening services, and the self-reported predictors of utilization. The questionnaire contained 62 items which are categorized into three sections consisting of both open and closed-ended questions. The questionnaire was given to experts in the field of study to determine its face and content validity. The instrument was pretested among 17 respondents (constituting 10% of the total sample size) selected from a different facility from the main study setting to determine its reliability. The result revealed a Cronbach's alpha score of 0.712.

Data analysis

Data analysis was done using the Statistical Package for Social Sciences version 20. Variables were analyzed using descriptive statistics in the form of frequencies and percentages and inferential statistics such as logistic regression. Knowledge of cervical cancer and screening was scored by assigning one (1) mark for each correct answer in response to related questions. The maximum knowledge score was 66; scores below average (scores less than 33) were designated 'poor' and scores above average (33 and above) were designated 'good'. The logistic regression was used to determine the predictors of cervical cancer screening and selected sociodemographic variables with a significance level set at $p \leq 0.05$.

Results

Table 1 shows the sociodemographic data of the respondents. A total of 182 questionnaires were administered to respondents and 170 were retrieved given a response rate of 93.4%. The mean age of the respondents was 41.9 (8.4). While 55.9% had 1-10 years of work experience, 40.6% had 11-20 years of work experience. Close to half (48.2%) of the respondents earn between 100,000 - 199,000 monthly and the majority (60.0%) of them were nurses.

Table 1: Socio-demographic attributes of the respondents

Variables	Frequency (n = 170)	Percent (100%)
Age (years) mean (SD) = 41.98 (8.428)		
21 – 30	12	7.1
31 – 40	75	44.1
41 – 50	59	34.7
51 – 60	18	10.6
61 – 70	6	3.5
Years of Experience		
1-10 years	95	55.9
11-20years	69	40.6
21-30years	6	3.5
Average monthly Income (naira)		
Less than 100,000	54	31.8
100,000 – 199,000	82	48.2
>200,000	34	20.0
Profession		
Nurses	102	60.0
Medical doctors	49	28.8
Pharmacist	9	5.3
Medical Laboratory Scientist	10	5.9

Table 2: Knowledge of respondents

Variables	Frequency (n = 170)	Frequency (100%)
Knowledge of cervical cancer		
Poor	66	38.8
Good	104	61.2
Knowledge of risk factors		
Poor	111	65.3
Good	59	34.7
Knowledge of prevention of cervical cancer		
Poor	146	85.9
Good	24	14.1
Knowledge of types of screening available		
Poor	81	47.6
Good	89	52.4
Knowledge of cervical cancer screening practices		
Poor	92	54.1
Good	78	45.9

Table 3: Self-Reported Ever utilization of cancer screening facilities

Variables	Frequency (n = 170)	Frequency (100%)
No	42	24.7
Yes	128	75.3

Knowledge of respondents on cervical cancer and screening methods

More than half of the respondents had good knowledge of cervical cancer (61.2%) and types of

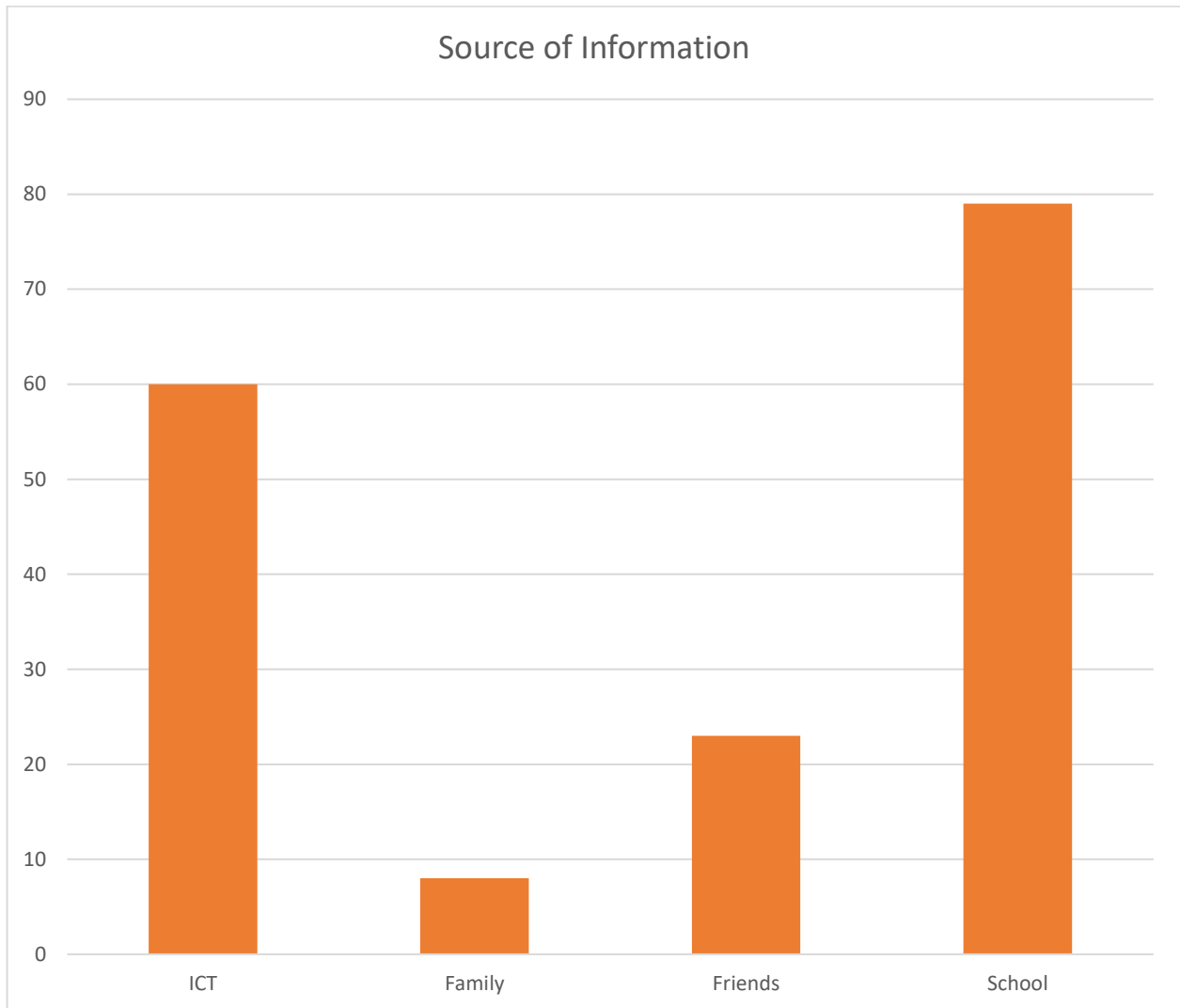


Figure 1: Bar chart showing source of information on cervical cancer

Table 4: Factors affecting utilization of cervical cancer screening (n =170)

Variables	Categories	
	Yes	No
Lack of time	133(78.2%)	37(21.8%)
Fear of negative results	140(82.4%)	30(17.6%)
Religious belief	112(65.9%)	58(34.1%)
Cultural values	106(62.4%)	64(37.6%)
Cost of screening	108(63.5%)	62(36.5%)
Painful procedure	136(80%)	34(20%)
Male staff attending to me	105(61.8%)	65(38.2%)
Lack of support from husband	104(61.2%)	66(38.8%)

available screening (52.4%). The majority had poor knowledge of risk factors (65.3%), prevention of cervical cancer (85.9%), and cervical cancer screening practices (54.1%).

Utilization of cancer screening facilities

About three-quarters of the study population (75.3%) reported good utilization of cervical cancer screening services with fear of negative results (82.4%), pain associated with the procedure (80%), and lack of time (78.2%) reported as the major factors affecting utilization of screening services. The regression analysis indicated that the respondents’ age ($\beta = 4.009, p < 0.001$), year of experience ($\beta = -4.350, p < 0.001$), fear of negative results ($\beta = -2.479, p = 0.014$) and lack of support from husband ($\beta = 4.380, p < 0.001$) all significantly predicted utilization of cancer screening services.

From Figure 1 on sources of information on cervical cancer screening 60(35.3%) knew from

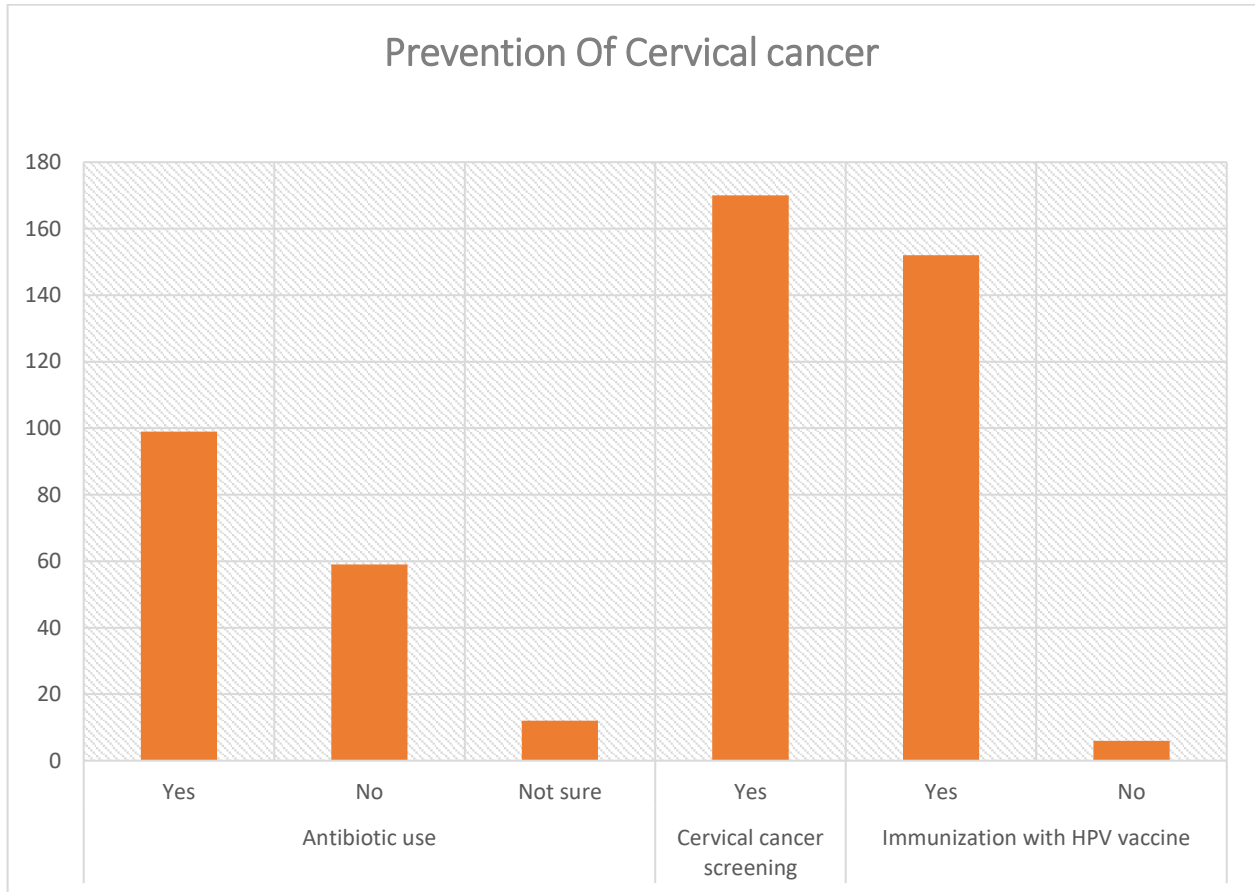


Figure 2: Bar chart showing prevention of cervical cancer

Table 5: The predictors of self-reported utilization of cancer screening facilities available

Model	Coefficients beta		T	Sig.
	Unstandardized	Standardized		
Age	0.115	0.568	4.009	0.000
Profession	0.045	0.022	0.320	0.749
Year of Experience	-1.870	-0.613	-4.350	0.000
Monthly Income	0.011	0.005	0.058	0.954
Fear negative results	-0.834	-0.187	-2.479	0.014
Cost of screening	-0.165	-0.047	-0.584	0.560
Lack of support from husband	1.200	0.344	4.380	0.000
Model summary				
Adjusted R ² = 0.194				
F = 6.795				
df = 7				
p = 0.000				

Table 6: Relationship between years of working experience and utilization of cervical cancer screening services

Variables	Categories	Utilization of cervical Screening services			X ²	df	p-value
		Poor utilization	Good utilization	Total			
Year of Experience	1-10 years	5	90	95	11.281 ^a	2	0.004
	11-20years	15	54	69			
	21-30years	0	6	6			

Information communication technology (ICT), 8(4.7%) knew from family, 23(13.5%) from friends, and 79(46.5%).

Figure 2 shows the various preventive practices identified by the respondents. 99(58.2%) reported the use of antibiotics, 170(100%) cervical cancer screening and 152(89.4%) mentioned immunization with the HPV vaccine.

Discussion

This study shows that the majority (61.2%) of the respondents have good knowledge of cervical cancer. This is consistent with previous studies which showed that 65.1% and 90.6% of their participants respectively had heard about cervical cancer^{13,14}. This was in contrast with other studies whereby 44.2% and 40% respectively of their respondents are only aware of cervical cancer^{15,16}. On knowledge of risk factors, this study confirms that the majority of the participants (65.3%) demonstrate poor knowledge of risk factors. Another study also demonstrates similar knowledge of risk factors¹⁶. This present study found out that health care workers were acquainted with cervical cancer screening, facilities all of the respondents have basic knowledge of cervical cancer screening. This was in contrast with a previous study conducted among female health care professionals where it was reported that many of the respondents were not knowledgeable about cervical cancer¹⁷. Three-quarters of the respondents in this study had ever undergone cervical cancer screening in their lifetime. Previous studies, both within and outside Nigeria have shown opposing results. A similar study conducted in a federal teaching hospital found that only 34.6% of their respondents had made use of cervical cancer screening services¹⁰. In addition, a study on the utilization of cervical cancer screening services and its associated factors among primary school teachers in Dar es Salaam, Tanzania shows that only 21% of their respondents have ever utilized cervical cancer screening services¹⁸. Notable factors identified by our respondents to hinder cervical cancer screening utilization include fear of negative results 140(82.4%), painful procedure 138 (80%), and painful procedure 133 (78.2%). The result of our study is in contrast with the findings from a previous study where they identified poor attitudes of female health workers, socioeconomic status, and unavailability of screening services¹⁰. The results of this study

indicate that knowledge of cervical cancer screening does not translate into widespread utilization of screening services. Factors such as age, years of experience, fear of negative results, and lack of support from husband were the predictors of utilization of cervical cancer screening by the respondents. The study reveal that female health care workers with years of experience less than 10years mostly utilize cervical cancer screening. These factors are similar to the ones identified by another researcher in an Ethiopian study conducted among commercial sex workers¹⁹. According to the America Cancer Society's (ACS)²⁰ new guideline, it was recommended that screening with HPV test alone every 5 years for everyone with a cervix should commence from age 25 until 65. It was concluded in the recommendation that the benefits of cervical cancer screening do not outweighs the harms for people aged 21 to 24 with an HPV test alone.

Ethical considerations

Permission to carry out the study was sorted and same approved by the ethical review committee of the study facility. Participants'consent was sorted before inclusion in the study and confidentiality of their information was ensured.

Conclusions

The respondents demonstrated a good knowledge of cervical cancer and cervical cancer screening. Screening uptake was high among the respondents and predicted by age, years of working experience, fear of negative results, and lack of spousal support. Efforts should be sustained in periodic seminars for health care professionals on the benefits of regular cervical cancer screening exercises. Advocacy should also be carried out to motivate and encourage them to avoid unnecessary barriers that may prevent them from engaging in the screening exercise. It is recommended that cost of screening should be subsidized, if not made free for all healthcare professionals, this will equally serve as a motivating factor in encouraging utilization of the service and should be made compulsory/pre-requisite for employment.

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