Awareness and attitudes of women towards cervical cancer screening in Oyo state, Nigeria

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Abstract

Cervical cancer is one of the leading causes of cancer deaths among women especially in the developing world. This study examined the awareness and the attitude of women towards cervical cancer screening in Agbowo Primary Health Centre in Ibadan, Nigeria. Using a cross-sectional study design and convenient sampling, a questionnaire was administered to collect data from 100 women who utilised postnatal and immunization services in the health centre. The hypotheses were tested using Pearson product moment correlation at significance level of *P*<0.05.

The findings showed that the majority (52%) of the participants were aware of cervical cancer, 58% were aware of cervical cancer screening but only 5.0% had utilised cervical cancer screening services. There was significant positive relationship (*r*=0.369; *P*=0.001) between awareness and utilisation of cervical cancer screening services and educational background and utilisation of cervical cancer screening services (*P*=0.002) as well as economic status and use of the screening services (*r*=0.276; *P*=0.001). Attitude and uptake of cervical cancer screening services also showed a positive correlation (*r*=0.276; P<0.006). Some of the factors that influenced uptake include lack of awareness about where to get screened, cost, attitude of health workers and delay in hospitals. The study has shown that cervical cancer screening uptake is still very poor, although, the awareness of cervical screening was fairly high. There is no doubt that education improve uptake of cervical cancer screening. There is still the need to create more awareness and make the services available so as to improve the uptake of cervical cancer screening.

Cervical cancer is the third most common cancer in women and the seventh most common overall (in both sexes combined). It was estimated to be responsible for 530 000 new cases of cancer in 2008, over 80% of which were in developing countries (Fylan, 1998; World Health Organization (WHO), 2006; Adewole, 2008; International Agency for Research on Cancer (IARC), 2008).

According to International Agency for Research on Cancer (2013), 266 000 deaths occurred among women worldwide as a result of cervical cancer in 2012. It is most notable in the lower-resource countries of sub-Saharan Africa (developing countries). The incidence of cervical cancer in Nigeria is increasing—in 2008, there were 25/100 000 cases (Obinna and Ogundipe, 2008); in 2013 Adewole and Ogundipe (2014) reported that 26 Nigerian women lose their lives to cervical cancer every day and a further 14 000 women are diagnosed each year with this disease. The high rate can be attributed to late diagnosis, poor knowledge and attitude towards prevention. Neilson and Jones (2001) found that the majority of women who die from cervical cancer have never been screened. Regular cervical screening is the best way to identify abnormal changes in the cells of the cervix at an early stage. Pelvic exams are especially necessary to detect any problems that could easily go unnoticed by a woman. Several factors have been attributed to poor uptake of screening services, these include awareness of cervical cancer and screening, fear of result, cultural constraints and poor funding.

In Nigeria, routine screening is not common practice. Even those who are aware of cervical screening and its importance are not using the cervical screening services. There is possibility that the incidence of cervical cancer will remain to rise and that disease will still be a major threat if prompt intervention is not instituted. Many studies have documented the existence of poor awareness and attitude of women towards cervical screening in developing countries. This may not be applicable to everywhere in the developing world, hence the need for further study and exploration on the subject matter. The general objective of the study was to determine the level of awareness and attitude of women towards cervical screening as well as factors influencing its uptake.

Awareness and uptake of cervical cancer screening

The uptake of cervical cancer screening services by women is a complex issue affected by several factors. The essence of screening is not to detect cancer per se but it is necessary to reduce the incidence of cervical cancer via early detection and treatment. Several studies in the subject matter identified the level of awareness, uptake and factors influencing decision

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regarding utilisation of cervical screening services. In a study conducted by Odetola and Oyetunde (2012) on knowledge, attitude and practice of cervical cancer screening among women in primary health care centres in Ibadan Nigeria, it was revealed that the majority of participants (54%) were not aware of cervical screening. The study also explored the uptake of cervical screening where it was revealed that only 31.4% of the respondents have had cervical screening. Of the respondents that claimed awareness of screening, only 39.9% received the information from the hospital and 9.2% from media.

Arulogun and Maxwell's (2012) study on perception and utilisation of cervical cancer screening services among female nurses in University College Hospital, Ibadan, Nigeria revealed that 128 (85.1%) of the respondents were aware of at least one screening centre in the city of Ibadan. The majority—465 (92.4%)—were aware of the test called 'pap smear' and 360 (77.4%) of these correctly stated that the test was used for the detection of cancer of the cervix and 455 (90.5%) confirmed pap smear to be a diagnostic test. However, only 174 (34.6%) of the respondents had made use of cervical cancer screening services.

A study carried out on cervical cancer awareness and cervical screening uptake at the Mater Misericordiae Hospital by Eze et al (2012) showed that awareness of cervical cancer (37.5%), its preventable nature (31.9%), cervical screening (25%) and screening centers (20.8%) were generally low and screening uptake (0.6%) was very low.

Ayinde et al (2004) conducted a study among undergraduates of University of Ibadan, revealed that 71% were aware of cervical cancer while only 33.5% were aware of a pap smear—only 8.3% had had a pap smear. Ezem (2007) conducted a similar study to determine the awareness and uptake of cervical cancer screening in Owerri, which revealed that 52.8% of the respondents were aware of the screening and that only 7.1% had ever had the test. It also found that most of the respondents who are aware, got the information about the tests from hospital (31.3%) and friends (30.9%). The major reasons cited for not being screened were: 'no need for it', lack of awareness that it could be done locally, fear and anxiety of a positive result.

Neilson and Jones (2001) assert that it is important to assess women's awareness on cervical cancer and screening because 92% of women with cervical cancer had never been tested. Their study also revealed a lack of awareness with regards to screening and possible causes of cervical cancer. Reasons for lack of uptake of the service were individually reported in the study, which included fear and dislike for the test; the majority of women preferred female professional to perform the screening on them.

A study conducted on knowledge and attitude of cervical cancer screening among women in Maiduguri, Nigeria by Audu et al (1999) revealed that less than 10% of women who participated in the study were aware of cervical cancer even fewer were aware of cytological screening. Akers et al (2007) reviewed the factors underlying disparities in cervical cancer incidence, screening and treatment in the US and found that cervical screening rates vary by age with higher rates observed among women of reproductive age compared to older women. Younger women who have not been screened are more likely to be from low socioeconomic status (Newman and Smith. 2007). Women with low socioeconomic status face significant barriers in accessing screening services because they are more likely to be unaware of the purpose of screening and have limited access to quality healthcare. However, socioeconomic background does not account for all the observed differences in screening rates. Lack of access to healthcare services, geographical differences, provider availability, and provider's behaviours and patients characteristics also account for poor uptake of cervical screening.

In a survey conducted among medical workers of Milago Hospital, Uganda on cervical screening by Mutyaba et al (2006), it was confirmed that attitude and practice of screening were negative despite the awareness of the gravity of cervical cancer and prevention by screening. Reasons for not participating in screening included, not feeling at risk, lack of symptoms, carelessness, fear of vaginal examination, lack of interest, test being unpleasant and not yet being of 'risky' age. Furthermore, women's participation in a cervical cancer screening programme in Northern Peru was investigated by Winkler et al (2008); it was revealed that screened women were slightly more educated, of average or high socioeconomic level and more likely to have a living husband or male partner than unscreened women. Unscreened women were more likely to report that their husband believe screening to be a harmful or evil practice and they themselves believe so too. The majority of the screened and unscreened women agreed that they were discouraged to participate in screening because either providers were too busy (50% and 58%, respectively) or the facility was closed (55% and 63%, respectively). Also, the study reported that the unscreened women expressed more concerns about a male provider performing the screening test. (Winkler et al, 2008).

This trend was similarly observed in a randomised controled trial by Nene et al (2006) who researched the determinants of women's participation in cervical cancer screening trial in Maharashtra, India. The study reported that only 8 women of 79 449 had ever been screened before out of 79,449. Attendance for screening was higher among women, who were younger, married or had a higher level of education; those living in households with 3–4 people and those who had ever used contraception (Nene et al, 2006). A lack of awareness of the importance of screening and increasing age was found to be associated with a decrease uptake of screening services.

Theoretical framework

The theory of planned behaviour links attitudes and behavior. It was proposed by IcekAjzen in 1985 and has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviour in various fields. The theory helps to predict and explain health-related behaviour such as cervical cancer screening as well as factors that influence the practice of screening.

External variables

These are factors around women that encourage or motivate them to participate in a cervical screening programme. Such factors include peer group and availability of the service. These variables can lead to a positive or negative attitude towards

screening services which in turn influence the actual uptake of screening services (behaviour). For example, if a family usually go for general medical check-up whether sick or well, such family is likely to motivate its female members who are eligible for screening if they have information about and access to the screening services.

Demographic variables

These include educational background, age, socioeconomic status, occupation and marital status. Attitude, awareness and behaviour toward screening can be affected by those variables.

Personality traits

These include the intrinsic and extrinsic forces that affect one's behaviour. A woman who does not feel in control of her health status is unlikely to go for screening.

Behavioural belief and attitude towards behaviour

If a woman believes that cervical cancer is preventable, can be cured if detected early and cervical screening is beneficial, she may be willing to participate in screening. This belief produces a positive attitude towards screening.

Normative belief and subjective norm

Women's attitude and behaviour towards screening can be influenced by the norms in the society or what they belief is expected of them by people who surround them. Cervical screening may be uncommon among women who do not receive motivation from their significant others. However, some women go for cervical screening not because it is acceptable to them (or their significant others) but they are conditioned to do so as in case of debilitating disease condition or test order by their health care provider.

Control beliefs and perceived behavioural control

Participation in cervical screening can be determined by locus of control. If the woman believes that obtaining cervical screening services will help reduce her risk of having cervical cancer, she may go for screening. However, if she sees certain factors or condition as impeding her participation, she will not take preventive actions. For example, if a woman thinks she cannot afford cervical cancer screening, she is not likely to attempt going for the test. Also, if she believes she can influence her health status, her attitude will be positive towards cervical screening. Conversley, a woman who believes God or the gods is the only determinant of her health status will not be positive about screening unless she is conditioned to do so.

Behavioural intention and behaviour

Willingness or intention to practice cervical screening is influenced by various factors like attitude, subjective norm, perceived behavioural control and many more. Uptake of cervical screening is a product of the relationship between intention and perception of the behaviour. For example, a woman may be willing to participate but impedes by the cost or non-availability of the service in her vicinity.

Method

The study utilised a cross-sectional study design to determine the awareness and attitude towards cervical cancer among women using postnatal and immunisation services in Agbowo Health Centre, Ibadan North Local Government area of Oyo State. The population comprised women of reproductive age (15–49 years) who used postnatal and immunisation services in the health centre. A convenient sampling technique was adopted for selecting women using this service. All the women who were available and willing to participate were selected for the study. Informed consent was obtained from them before data were collected. The period of the study lasted for 4 weeks so as to accommodate those on alternate clinic days. From the health centre record, an average of 240 women use the facility in a period of four weeks. Based on this, the sample size was calculated from the population using Krejcie and Morgan formula. The sample size was approximately 91 with an estimated attrition of 10%. Hence, there were 101 women in the study but only 100 questionnaires were analysed.

The data were collected using an interviewer administered questionnaire developed from relevant literatures. An introductory/permission letter from the department of Nursing, University of Ibadan, Nigeria was forwarded to Agbowo Health Centre in Ibadan North Local Government, Oyo State prior to the study. After which, approval was given to carry out the study based on the institutional policies. Only, consenting women participated in the study. The questionnaire was collected immediately. One hundred and one 101 questionnaires were distributed, only one was not fit for analysis because it was poorly completed.

The data obtained were coded and analysed using SPSS. Initial analysis was by generation of frequency tables while further analysis involved cross tabulation to explore statistical relationships between variables. The hypotheses were tested using Pearson product moment correlation with statistical significance set at $P<0.05$.

Results

Table 1 shows the demographic characteristics of respondents. Of 100 respondents, 45 were between 26 and 30 years old while 12 were between 31 and 35. Ten were between 36 and 40 years. Additionally, 83 were married,10 were single mothers and the remaining 2 were separated. The results revealed that 60 women were Muslim and 37 respondents were Christian. In terms of highest educational qualification, 39% of the participants obtained West African Senior School Certificate Examination (WASSCE). The study also revealed that 56% were traders, 2% were civil servants while the other participants were artisans.

Table 2 indicated that 52% of the participants were aware of cervical cancer, while 58% were aware of cervical screening. The majority of the respondents got the information about cervical screening from hospital (78%)

Table 3 showed the attitude of the respondents towards cervical cancer screening. About 28 respondents indicated strong a belief that they cannot have cervical cancer whereas 46 strongly disagreed with that. Furthermore, 51 strongly disagree that cervical cancer is spiritual but 11 agree to that. Fifty-one strongly disagree to not obtaining the test because of anxiety. However 6 agree to being anxious of the result of the cervical screening. Moreover, 4 of the respondents agreed that

the disease is incurable so no need wasting money on screening but 77 strongly disagreed. Thirty-two of respondents did not want a male health worker to perform the test on them and 76 strongly believe that they cannot influence their health status hence no need for cervical screening.

Table 4 outlines the factors that influence uptake of cervical screening. seventy percent of respondents did not know where to get screened and 74% reported inadequate knowledge about the screening while 70% said that the service is not rendered in the clinic where they use. Up to 46% of respondents believed that they are not prone to cervical cancer. The study also revealed that no health worker had told 47% about screening, 39% of respondents said that nurses in the clinic where the study is carried out do not talk about it, 39% could not afford the cost of screening, 28% were in fear of pain and discomfort from the screening, 32% were discouraged by the attitude of health workers and 26% said there was a delay in hospitals.

Table 1. Sociodemographic characteristic of the respondents

Variables	Frequency *n*=100
Age (in years)	
20-25	31
26-30	45
31-35	12
36-40	10
No response	2
Marital status	
Single mother	10
Married	83
Separated	2
No response	5
Religion	
Christianity	37
Islam	60
No response	3
Educational qualification	
No formal education	3
Primary school certificate	13
Junior school certificate	25
West African senior school certificate	39
Diploma	9
BSc	9
No response	2
Occupation	
Trading	56
Fashion designer	13
Computer assistant	2
Student	6
Hair dresser	12
Civil servant	2
No response	9
Average income earned per month	
2000 Naria	9
3000 Naria	8
5000 Naria	32
9000 Naria	2
10 000 Naria	23
12 000 Naria	5
15 000 Naria	2
30 000 Naria & above	2

There was significant positive relationship between awareness of cervical cancer screening and uptake among respondents (r=0.369; P<0.001). The null hypothesis was therefore rejected.

There was significant positive relationship between utilisation of screening and educational background among participants(r=0.1946; P=0.002): screening service is dependent on educational background of the respondents, the more educated the respondents were, the more likely they were to be screened.

There was significant positive relationship between uptake and socioeconomic status among the participant (r=0.276; P=0.001). There was also a significant positive relationship between uptake and attitude (r=0.276; P=0.006). The null hypothesis was therefore rejected. Thus uptake increases with positive attitude.

Discussion

The majority of the study population was between 26 and 30 years old. Therefore, most women using the health centre are within this age range. About 52% of the women were aware of cervical cancer while 58% of the total study sample were aware of cervical cancer screening. In spite of their awareness of cervical cancer and screening, only 5% had ever been screened. Previous studies also showed low level of uptake of screening services among medical workers 87% had never been screened (Mutyaba et al, 2006). Although medical workers are supposed to be the vanguard of health programmes, their turn out was not high and they may be less likely to encourage their clients towards uptake of cervical cancer screening.

Although, awareness of cervical cancer and screening was fairly high, there is need for improvement. However, the factor that was in favour of awareness of the screening is utilisation of health facility because the majority of the respondents (78%) who knew about cervical screening got the information through the hospital. This corresponds to the findings of Ezem (2007) and Ayinla et al (2004) where 31.1% and 39.5% got the information from hospital, respectively. These percentages were higher than other sources of information (media, friends and school). Therefore, there is need for improve awareness beyond health facilities.

Another major finding of the study is that awareness of cervical screening outweighs its use by the study population. This is in line with the study finding of Ayinla et al (2004) where only 8.3% of the respondents had been screened compared to 33.5% of the respondents who knew about the screening. Moreover, another survey conducted by Ezem (2007) in Owerri validates this, only 7.1% had ever had cervical cancer screening whereas 52.8% of the study population was aware of

the screening. This shows the need for intensified publicity of the importance of screening in relation to health promotion.

Attitude towards screening was also explored in this study. Forty six respondents believed that they could not have cervical cancer. Most of the study population had a positive opinion towards the screening, but this did not translate into action.

Various reasons were given for not being screened. These included: lack of awareness on where to get screened (70%) and not having adequate information about cervical screening (74%). This agrees with the findings by Ayinde et al (2004) which stated that 52.3% of the studies participants believed they were not at risk of cervical cancer. Reasons cited by the study population according to Ayinde et al (2004) were lack of awareness about the test (64.1%), lack of awareness about where to get screened (16%), reluctance to be screened (9.5%) and cost of screening (5.9%). Non-uptake could be due to anxiety regarding physical privacy. Lack of awareness, considering screening unnecessary, being unaware that screening can be done locally, fear of bad results, not being recommended by a physician and the screening being too expensive were the reasons highlighted in the study carried out by Ezem (2007) among women in Owerri, Nigeria.

Irrespective of the percentage attached to each reason for non-uptake, each must be tackled with utmost importance because each factor is capable of rendering the existing screening programme useless consequently leading to further increase in the incidence of cervical cancer. It is evident that reasons and attitude associated to poor uptake are closely related to lack of knowledge about the disease process and ineffective dissemination of information on the part of health workers.

The study also showed a positive relationship between awareness and uptake. This suggests that awareness of cervical cancer screening increases uptake of cervical screening. Hence, health education of the entire populace is an important factor to improving attitude towards cervical screening. If adequate awareness is to be achieved through health education, it should go beyond hospitals. Audu et al (1999) suggested that education must precede a screening programme if it is to succeed.

The second hypothesis revealed that a positive relationship exists between educational background and uptake of cervical cancer (r=0.311; P=0.002). This implies that higher level of education is likely to improve uptake of cervical screening. Previous studies on the relationship between education background and uptake of cervical screening are of the opinion that low level of education impedes participation in cervical screening (Nene et al, 2006; Winkler et al, 2008). However, Ferrera et al (2000) did not find a significant positive relationship between education and screening. To buttress that, the study in Uganda among medical workers showed poor uptake of screening despite the high educational level and awareness of the havoc of cervical cancer.

Also, a positive relationship was found between uptake of cervical screening and economic status of respondents (r=0.625; P=0.001). This was in line with the findings of Akers et al (2007) among women in US where it was reported that the majority of the unscreened women in the study were from low socioeconomic status. This would suggest that uptake improves with high socioeconomic status and vice versa. A

Table 2. Awareness of cervical cancer and screening

Variables	Frequency
Heard about cervical cancer	
Yes	52
No	48
Heard about cervical cancer screening	
Yes	58
No	37
No response	5
Source of information	
Hospital	78
Media	15
Friend	7

Table 3. Attitude towards cervical cancer screening

Statements	SA	A	U	D	SD	NR
	n	n	n	n	n	n
Can't have cervical cancer	28	7	6	13	46	/
The disease is spiritual	11	11	2	25	51	/
I'm anxious about the result	6	6	6	17	65	/
the disease is incurable	4	2	/	17	77	/
No need for routine test	22	4	/	18	56	/
The disease can't kill	12	4	4	23	57	/
I don't want male health worker to screen	32	/	3	6	59	/
I can't influence my health status	4	5	2	10	76	3

SA—strongly agree; A—agree; UD—undecided; D—disagree;SD—strongly disagree; NR—no response

Table 4. Factors influencing uptake of cervical cancer

Variables	Yes	No	No response
Lack of awareness on where to get screened	70	26	4
No health worker ever told me about cervical screening	47	49	4
Nurses in this clinic don't talk about it	39	57	4
I can't have cervical cancer	46	48	6
It is forbidden by my religion	0	100	0
I don't have adequate information about cervical screening	74	19	7
I can't afford the cost	39	54	7
I'm afraid of pain and discomfort	28	68	4
The service is not offered in the clinic I attend	70	24	6
Attitude of health worker discourages me from going for the screening	32	64	4
Delay in hospital discourages me from going for the screening	26	70	4

Key Points

- Cervical cancer is one of the leading causes of cancer deaths among women especially in the developing world
- Cervical cancer screening uptake is still very poor
- Some of the factors that influenced uptake include lack of awareness about where to get screened, cost, attitude of health workers and delay in hospitals
- There is still the need to create more awareness as education improve uptake of cervical cancer screening
- Cervical screening services should be made affordable and accessible to women so as to improve the uptake of cervical cancer screening

low income country is unlikely to benefit from sophisticated screening programmes as the majority of the people cannot afford the services.

Furthermore, the study revealed a positive relationship between uptake and attitude (r=0.276; P=0.006). Attitude towards behaviour is a product of many factors like cultural belief, opinion of significant others and many more. A woman whose peer group does not support screening is less likely to be screened. In a study by Winkler et al (2008), it was revealed that the unscreened women reported screening as been evil or harmful. Some of the women said their husband believes that screening is harmful. Thus the practice of cervical screening will improve with a positive attitude towards cervical cancer.

The awareness of cervical cancer and its screening in this study were fairly good yet only a few had ever been screenedFactors that influence uptake are numerous and includes cost, belief of not being prone to the disease and lack of awareness about where to get screened. There is need for enlightenment cervical cancer screening and its importance so as to improve uptake of cervical screening.

Implication of findings

From the findings of this study and other related studies, it means that nurses should extend their fundamental roles to reduce the incidence and mortality rate of cervical cancer. To achieve that nurses must be ready to equip themselves with the necessary skills to be able to render cervical screening education and services. Health education on cervical screening should be made routine and this requires the nurse to have up to date information on the subject matter. Since the nurse is the major point of contact in hospitals, she should have the training and skills required for performing cervical screening without having to refer. Therefore, it should be incorporated into current nursing curriculum and training opportunities for the practicing nurses.

Conclusion

Although, awareness about cervical cancer and screening was fairly high, there is room for improvement in Nigeria. The level of awareness and uptake at present will produce no significant impact on reducing the incidence of cervical cancer. Furthermore, hospitals should not be the primary source of information because large percentages of the Nigerian population don't utilise health facilities. In order to disseminate information to different groups, public health campaigns should extend to public places such as markets, church, mosque and conferences, mass media and other media sources for effective information dissemination cervical cancer screening.

Recommendations

Cervical cancer screening can greatly reduce the impact and burden of cervical cancer on society. In most countries where there is a well established cervical cancer screening, the incidence of cervical cancer has reduced greatly. Therefore, the following recommendations are made:

- Organised cervical screening should be made available in every part of the country by both governmental and non-governmental bodies involved in promoting health among the populace. A multi-component approach should be adopted to increase participation. These include providing adequate staffing, involving community leaders and husbands, counseling, face-to-face invitation and ensuring health literacy
- Greater public awareness should be made through multimedia by government, non-governmental organisations and health institution
- Logistic obstacles to cervical screening should be removed by government such as funding
- Family and sex education should be made popular by incorporating it into the school curriculum and healthcare services. Health professionals should work in conjunction with educational board authority to ensure this
- The government should facilitate accessibility and availability of cervical screening services in all health facilities. This can be ensured by making cervical cancer screening services available in all facilities
- Use of opportunistic screening—cervical cancer screening should be made routine whenever women use hospital services as in the case of HIV screening. Government and health institutions should make this a policy
- National cervical screening policies should be instituted and implemented by government and other stakeholders involved in health promotion. **AJM**

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