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The Need for Integration of Cervical Cancer Screening into Family Planning Services among women in Ibadan, Nigeria: A Cross-Sectional Study

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Abstract: Cervical cancer screening (CCS) access has remained a major challenge in developing countries. Integration of CCS into family planning services (FPS) is one strategy that could increase access and uptake of CCS services (CCSS). There are limited data on the integration of CCS into FPS, in Ibadan; hence, this study assessed the need for integration of CCS into FPS in Ibadan, Nigeria. This cross-sectional study was conducted among 202 female family planning clinic attendees selected using purposive sampling technique. A structured interviewer-administered questionnaire was used for data collection. Quantitative data were analyzed using descriptive and inferential statistics at 0.05 level of statistical significance. Mean age of the women was 32.7±6.5 years, 74.3% had poor knowledge of cervical cancer 80.2% had positive perception of the integration of CCS into FPS, 7.4% had utilized CCS, 76.2% were willing to uptake CCSS. There was also a significant association between educational level and knowledge on CCS (p= 0.000); also with the perception of inclusion of CCS into FPS and willingness to utilize CCSS (p= 0.000). The need for integration was evident as the respondents had positive perception of integration of CCS into family planning services.

Keywords: Cervical cancer screening; Integration; Family planning services; Perceived need

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1 Introduction

Cervical cancer is a significant public health burden in most low Human Development countries and a major cause of morbidity and mortality among women[1]. It is the second most common cancer among women worldwide, with approximately 90% of mortality cases reported in low resource countries[2,3]. As the leading cause of cancer among 23 out of 48 countries in the Sub-Saharan Africa (34.8 per 100 000 women), inadequate coverage of screening and preventive treatment services contribute to this challenging public health situation[4,5].

Nigeria is one of the countries with the highest burden and death rates from cervical cancer, with more than 53 million women at risk[6]. Cervical cancer screening (CCS) is a preventive measure that detects precancerous cells at early stages[3]. It offers protective benefits and is associated with a reduction in the incidence of cervical cancer mortality[7]. Integration of cervical cancer screening to existing programmes is an approach that may be acceptable and feasible when introduced into existing sexual and reproductive health services[7,2].

Family planning clinics provide ample opportunities for contact with women in the reproductive age group who may have little knowledge of cervical cancer issues[8]. At these clinics, tailored educational messages on cervical cancer can be included in the visits to address gaps in knowledge and correct myths and misconceptions. The emphasis must be placed on early detection to improve survival and reduce the proportion of women diagnosed in late stages[8].

Integration of cervical cancer prevention services through existing reproductive health networks such as family planning is one strategy to increase access and coverage of cervical screening services, as well as uptake of family planning[5]. Integration can be described as the uptake of both family planning and cervical cancer screening services during the same visit[9,10]. There are limited data on the extent of integration of cervical cancer into Family Planning services in Ibadan, Nigeria. This study evaluated the need for integration of cervical cancer screening into family planning services in Ibadan.

2 Materials and Methods

2.1 Study Design and Setting

This study adopted a non-experimental, descriptive, cross-sectional approach, using a structured interviewer-administered questionnaire.

2.2 Setting

The study was carried out in three (3) family planning clinics in Ibadan, South West Nigeria. Ibadan is the capital city of Oyo State and the third largest metropolitan area in Nigeria. It consists of 11 Local Government Areas (LGAs). Three LGAs were selected for the study and one family planning clinic within the LGAs with large number of women who seek family planning services was assessed and chosen. The clinics were namely: Ojoo primary Health Centre, Adeoyo Maternity Teaching Hospital and Police Health Clinic, Ibadan, Oyo State.

2.3 Study Size

Up to 202 women utilising the FP clinics of the selected health facilities in Ibadan, Oyo State participated. Eligibility criteria**:** women between 21 and 56, attending family planning clinic and nurses working in these clinics at the Adeoyo Maternity Teaching Hospital, Ojoo

primary health Centre and Police health clinic Agodi.

2.4 Sampling Technique

The purposive sampling technique was used to select respondents of childbearing age attending family planning clinics in the three major family planning clinics the three selected LGAs in Ibadan.

2.5 Data sources/measurement

A structured interviewer-administered questionnaire was used for the data collection. This questionnaire was based on research objectives and the literature review covering: socio-demographic characteristics; knowledge on cervical cancer and cervical cancer screening and perception of inclusion of cervical cancer screening into family planning services. The instrument had Cronbach's alpha reliability coefficient of 0.89.

2.6 Data Collection Procedure

Data were collected from respondents using the validated questionnaire after obtaining necessary ethical and institutional approvals. The respondents spent approximately 30 minutes to fill the questionnaire had been completed to the best of their ability

2.7 Statistical methods

Data were collected, coded and entered into the Statistical Package for the Social Sciences (SPSS) version 20 for analysis. Descriptive statistics such as frequency, counts, percentages, charts, mean and standard deviation were used to summarize and present the results. Knowledge of cervical cancer score was maximum of 28 points; a score of 14 and above was categorized as 'good knowledge', while 0-13 score was categorized as 'poor knowledge'; knowledge of cervical cancer score was maximum of 12 points; a score of 6 and above was categorized as 'good knowledge of cervical cancer screening', while 0-5 score was categorized as 'poor knowledge'. A Chi-square test was used to determine the association between the categorical variables at p-value < 0.05. A Fisher's exact test was used where the expected cell size was less than 5. Multivariable regression analysis examined the relationship between the variables of p-value <0.05.

Table 1. Respondents' Socio-demographic Characteristics

Variables	Frequency n =202	Percentage (%)
Age group		
21 – 29 years	66	32.7
30 – 38 years	94	46.5
39 - 47 years	40	19.8
48– 56 years	2	1.0
Marital status		
Single	3	1.5
Married	199	98.5
Religion		
Christianity	111	55.0
Islam	91	45.0
Occupation		
Full house wife	15	7.4
Employed	18	8.9
Self employed	169	83.7
Educational status		
No formal education	8	4.0
Primary	41	20.3
Secondary	113	55.9
Tertiary/University	40	19.8
Number of living children		
Less than 4	174	86.1
5 and above	25	12.4
None	3	1.5

2.8 Ethical Consideration

This study was conducted after approval from the University of Ibadan/ University College Hospital Ibadan Research Ethics Review Committee (Approval No UI/EC/19/0581). Also, an official permission was also obtained from the head of the family planning clinic (a nurse) before questionnaires were distributed

and the interview was conducted. Informed consent was obtained from the participants.

3 Results

General characteristics: A total of 202 women, with mean age of 32.7±6.5years, were interviewed and almost half 94 (46.5%) of them were between 30–38years. Other socio-demographic characteristics are presented in Table 1.

Knowledge on cervical cancer and cervical cancer screening: Almost three-quarters of the respondents 150 (74.3%) had poor knowledge on cervical cancer, 183 (90.6%) had poor knowledge on cervical cancer screening (Figure 1).

Perception of cervical cancer screening integration: Most of the respondents 162(80.2%) had good perception of integrating CCS into the family planning services (Figure 1).

Respondents' Perceived factors influencing the uptake and integration of cervical cancer screening service into family planning services`: Only 15(7.4%) had utilized CCS while 187 (92. 6%) had not; nevertheless, 154(76.2%) were willing to uptake CCSS (Table 2).

The perceived factors influencing the uptake and integration of cervical cancer screening service into family planning services on table 2 were mainly inadequate awareness on CCS 44 (21.8%), lack of knowledge on cervical cancer 34 (16.8%), lack of access to CCS in family planning clinics 34 (16.8%) and lack of education on female cancers in family planning clinics 27 (13.4%).

Data correlates: There is a significant association between educational level and

Table 2. Respondents' uptake/perceived factors influencing the uptake and integration of ccs in family planning clinics. ccs – cervical cancer screening

Uptake and willingness to uptake CCS	Yes (%)	No (%)
Ever been screened for CC	15(7.4)	187(92.6)
Willing to be screened for CC	154(76.2)	48(23.8)
Perceived Factors Influencing uptake of CCS in Family planning Clinics		
CCS procedures is a painful procedure	0 (0)	202 (100)
CCS will be an additional cost	5 (2.5)	197 (97.5)
Inadequate awareness on CCS	44 (21.8)	158 (78.2)
CCS is time consuming	4 (2)	198 (98)
Cultural factors	7 (3.5)	195 (96.5)
Religious factors	5 (2.5)	197 (97.5)
There is no medical indication for me to go for cervical cancer screening	2 (1)	200 (99.0)
Fear/anxiety of outcome	15 (7.4)	187 (92.6)
Lack of knowledge on cervical cancer	34 (16.8)	168 (83.2)
Perceived Factors Influencing integrating of CCS into FPS		
CCS is not convenient during family planning clinic	0 (0)	202 (100)
CCS is not accessible in family planning clinics	34 (16.8)	168 (83.2)
My partner will not permit me to have CCS done during the family planning visit	0 (0)	202 (100)
Lack of education on female genital cancers in family planning clinics	27 (13.4)	175 (86.6)

knowledge on CCS (p-value =0.000) (Table 3) which suggests that the educational level of the respondents could determine their level of knowledge on CCS. The perception of inclusion of CCS into FPS also had a significant association with willingness to utilize CCSS (p-value=0.000). This implies that the respondents' perception of inclusion of CCS into FPS will influence their willingness to utilize CCSS. In addition, knowledge on CCS had a significant association with being ever screened for CC (p-value=0.000). This infers that the respondents' knowledge on CCS will determine if they would ever be screened for CC.

Table 3. Test of association between selected variables: Association between the women's educational level and knowledge of women on cervical cancer screening

Level of education	**Level of knowledge on cervical cancer screening**				
	Good	**Poor**	**Total**	**Fisher's**	**Remark**
Primary and below	3	46	49	0.000	Significant
Secondary	5	108	113		
Tertiary	11	29	40		
Association between perception of inclusion of CCS into FPS and willingness to utilize CCS in family planning clinic					
Perception of inclusion of CCS into family planning services	Willingness to utilize CCS in family planning clinic				
	Yes	No	Total	Fisher's	Remark
Good	152	10	162	0.000	Significant
Poor	2	38	40		
Association between level of knowledge on cervical cancer screening and cervical cancer screening uptake					
Level of knowledge on cervical cancer screening	Ever screened for cervical cancer				
	Yes	No	Total	χ2	df	p-value	Remark
Good	7	12	19	26.400	1	0.000	Significant

4 Discussion

This study evaluated the knowledge of women on cervical cancer and CCS, at selected family planning clinics within Ibadan, their perception of the integration of CCS into family planning services, the type of reproductive health information and services provided by the nurses as part of family planning services and the perceived factors influencing the integration of CCS services into FPS.

The study showed that less than a quarter of respondents had adequate knowledge on cervical cancer which is similar to a study by Oluwole et al and others[11–15]. On the other hand, the majority of the respondents were positive about the integration of cervical cancer screening into family planning services as they believe that the screening for cervical cancer is a necessity. Similarly, a study showed that over half of the women in the southern region of Saudi Arabia agreed that early detection could prevent cervical cancer[16]. Also, a study on the determinants of CCS utilization among women in Blantyre district, Malawi, revealed that 76.3% of the women had good perception of cervical cancer screening[17].

Cervical cancer screening uptake was poor in this study; less than 10% of the respondents had ever been screened for cervical cancer. This is a common finding in many settings in Nigeria and other African countries like Zimbabwe

where majority, 83.2%, of their women reported never to have been screened for cervical cancer[18], while less than 25% of women in Lagos, Nigeria had ever been screened for cervical cancer[19,20].

Over three-quarters of the respondents in this study were willing to take up CCSS. This is higher than the report obtained from a study among Pakistani women by Sultana, et al. which indicated that that up to 55.8% of the women agreed for future cervical screening[21]. On the respondents' perception of factors influencing the integration of cervical cancer screening service into family planning services, some of them identified lack of awareness, lack of access, lack of knowledge of cervical cancer, cervical cancer screening as an additional cost, fear/anxiety of the outcome as well as poor motivation of health workers as major issues to consider. In developing countries, most of the women are neither aware of the screening methods nor have access to health care facilities that avail such opportunity[21,22]. Also, a study on the assessment of cervical cancer awareness among primary health-care providers in Zaria, Nigeria, revealed that participants had attended several workshops but none of the workshops were on cervical cancer[23].

The need to improve access and uptake of cervical cancer screening services has led to various innovations including integrating screening services. According to Li et al., studies have found that more screening programs are emerging, especially in urban settings[24]. Similarly, Katusiime, et al., study on effect of service integration on cervical cancer screening and family planning uptake among women in Mukono District, Uganda showed that more women participated in integrated services than focusing on cervical cancer screening alone[25]. A study on integrating cervical cancer screening within family planning provision in peri-urban, Zambia among women showed those CCS services were received by 31% of clients who came in desiring FP or CCS services in maternal and child health settings[26]. This shows that integration of CCSS has a greater beneficial effect when fully implemented, especially alongside fighting against maternal and infant mortality and morbidity in resource poor countries[27].

There is also urgent need for educational intervention for family planning nurses on cervical cancer screening in order to improve women's access to this health service. Some facilities in Zambia had one Society for Family Health (SFH) health care provider trained in cervical cancer screening and treatment and provided both family planning and cervical cancer screening services from the same facility[26]. This is not the case in the present study setting as cervical cancer screening services were not available in the facilities where the study was conducted. The findings of the study have shown that there is a need to create further awareness on cervical cancer and cervical cancer screening in order to increase the uptake of screening services thereby ensuring early detection cervical cancer.

5 Conclusion

This study has shown that majority of the clients attending family planning clinics were willing to receive both family planning and cervical cancer screening if such services are available in the same facility. They had a positive perception on the integration of the screening services into the current FPS. Therefore, it can be concluded that there is need ensure the services are available in order to ensure easy access to the services during family planning clinic. It is therefore recommended that integration of CCS services into the established family planning services should be prioritized

by policy makers as this will increase accessibility and uptake of the cervical cancer screening services. This study has shown great potential in enabling early detection of premalignant cervical cancer lesions and offering of appropriate care with a subsequent satisfactory outcome.

Conflict of interest: The authors declare no competing interest.

Author's Contribution: CMN and AOS participated in all aspects of preparation of this manuscript, conceived the study, selected data, conducted data analyses, reviewed the scientific content and interpretation of findings, discussion and conclusions. TAO, and AMY participated in conceptualization, data analyses, interpretation of findings, discussions and review of scientific content. OAO participated in the conceptualization and manuscript development. MB and AA provided necessary guidance and participated in the manuscript writing. All authors read and approved the final manuscript.

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