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Original Research Article

Factors influencing the acceptance of cervical cancer screening among civil servants in Delta State Secretariat

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ABSTRACT

Background: Cervical cancer is one of the top two cancers affecting Nigerian women. This has created impetus to investigate the situation. This third of a four-part series seeks to evaluate perception, acceptance and psychosocial factors of cervical screening among women who are gainfully employed in the State's civil service within Delta State Secretariat.

Methods: Based on cross-sectional descriptive survey using a structured questionnaire and 'N=285' participants. Statistical analysis assessed percentage proportions of respondents; as well as absolute and relative frequencies of the factors associated with acceptance of screening. Chi-squared analysis was based on no/yes response to have done cervical screening.

Results: About 10% of respondents have undergone cervical screening. 16% of the lowest income earners have done the screening, compared to 8% and 10% of the mid income and high income group, respectively. Nature of work implying time constraints was an absolute factor. Knowledge of what cervical cancer is; the causes; how to detect and prevent it are significantly associated ($p < 0.01$), while accessibility, fear of adverse effect and attitude of healthcare workers were significant psychosocial factors ($p < 0.01$).

Conclusions: This report affirms nature of work and accessibility as two of four major factors influencing acceptance of cervical screening among working class women in Delta State secretariat. It is hereby suggested to expound sites of cervical service programs.

Keywords: Cervical service, Inaccessibility, Nature of work, Psychosocial barriers, Women

INTRODUCTION

Cervical cancer is about the eight most common cancer worldwide, but known to be the fourth affecting women, and up to 60% of the cancer burden among this gender group.¹⁻³ It is quite notable in low and middle income countries where nearly 90% of deaths from cervical cancer is reported to have occurred.² In sub-Saharan African more than 50,000 deaths and 75,000 new cases are estimated to occur yearly.⁴

As at 2012 when 528,000 new cases were estimated globally, cervical cancer was the second most common among Nigerian women.⁵

It is speculated that the incidence rate of cervical cancer is lower for the world, compared to West Africa and Nigeria in particular.⁶ This has created a renewed impetus to investigate the situation in Nigeria.⁷⁻¹² Indeed, the situation in Nigeria has been reported to include the following speculations:

- Cervical cancer service centres need to be expounded and made closer to the people, and also made affordable.¹⁰
- The barriers to cervical cancer screening go beyond accessibility and awareness. Socioeconomic status as well as perceptions and family support are part of psychosocial factors.⁹ Cultural and religious beliefs are also notable factors.^{5,13}
- Community health educators as well as peer education would improve women's perception regarding cervical cancer screening.^{7,8} Mass media education is also a necessary option.¹²
- The discomfort associated with invasive Pap smear specimen collection method is a major unmet need of clients.¹¹

It is known that the peak age of cervical cancer incidence is in the mid-forties and while nearly half of the women with the invasive of disease are below 35 years old, 80% or more of the cases are diagnosed at advanced stage.¹⁴ Further, gainfully employed have the attitude of procrastinating hospital visits and screening services due to many activities competing for limited time, especially due to exigencies of their job.^{15,16} Therefore, the need for screening has been known and cannot be over-emphasized. That is, the need to research into women who have yet to attend any screening program has remained imperative.¹⁷ Hence, the objective of this piece of work is to evaluate the perception as well as acceptance and factors of cervical screening among women who are gainfully employed in the State's civil service within the capital city. At the time of commencing this work, there was yet to be any report of study in Delta State, but another parallel study is currently ongoing.⁶

METHODS

As described in the first and second part of this series, this was the third of four pieces of work in the study. It was designed to be a cross sectional, descriptive survey method. The study setting was the Delta State Secretariat Clinic located in Asaba, the State capital (Approval Reference: HD 92/A/28 Ministry of Health). Four hundred and fifteen (415) questionnaires were distributed, out of which 285 were satisfactorily completed and included for analysis. Consent and voluntarism were assumed on return of the completely

filled forms. Therefore, others did not submit, were incompletely filled, or were returned unfilled.

Quantitative questionnaire survey was used to collect data on eight demographic factors including age, educational level, ethnicity, income level, marital status, number of children, religion and workplace. The demographics data in sections A and B of the structured questionnaire were analyzed as part one of the series. Sections E and G were used to evaluate acceptance and factors of HPV vaccination as part two in the series. For this particular study; section C (perceived susceptibility to), D (uptake of), and F (psychosocial factors influencing) cervical cancer screening were analyzed.

Statistical analysis

Percentage proportions of respondents were assessed for the eight demographic factors. Absolute frequencies of affirmative responses to the questions on knowledge were evaluation. Hypothesis was tested by Chi square method at a significance of level of $p < 0.05$.

RESULTS

Descriptive statistics on responses show that 28 persons screened once and two persons twice; while the remaining 255/285 have yet to screen. 13% of the respondents including some of those who have screened or wished to screen later indicated unwillingness to encourage someone (Table 1).

Analysis of perception of susceptibility, analysis of relative frequencies of positive responses indicate every respondent being aware that having multiple sex partners constitute a risk. Beside one respondent knowing that having many children is a risk factor, only 22/285 i.e. <1% is aware that being female is a susceptibility factor (Table 2).

Analysis of psychosocial factors that may influence uptake of cervical screening (N=285) show absolute agreement that religion is not a factor. Conversely, nature of work is indicated by all respondents to an influential factor (Table 3). Among the other factors assessed, discouragement by colleagues and lack of spousal support are the topmost two influential factors, while affordability is the least (Figure 1).

Table 1: Acceptance of, and willingness uptake of cervical cancer screening (N=285).

Questions	Yes	Yes %	No	No %
Have you been screened for cervical cancer	30	10.5	255	89.5
If No; will you go for screening later	240	84.3	19 [†]	6.7
Will you encourage someone	248	87	37 [‡]	13
Cannot accept because of side-effects and my age	86	30.2	199	69.8

[†]Includes four of those who indicated to have screened. [‡]Includes some of those who indicated to have been screened or to screen later.

Table 2: Responses to perception of susceptibility.

Questions	N /285	Relative Hz
Having many children increases the risk	1	0.03%
As a female I am susceptible to CC	22	0.67%
Having uncircumcised male partner is a risk	88	2.68%
Being overweight increase risk of CC	132	4.02%
Non-regular pap smears make early detection difficult	139	4.23%
Exposure to another’s cigarette poses risk to CC	155	4.72%
Having sex before 18years increases risk	181	5.51%
Family history of death by cancer increase risk of CC	188	5.72%
Long term use of contraception is a risk to CC	219	6.67%
Having weakened immune system increase risk	248	7.55%
Doing less physical activity increased risk of CC	263	8.01%
Susceptibility to HPV causes it	263	8.01%
Eating less fruits and vegetables increases risk	264	8.04%
Infection with sexually transmitted infection is a risk	269	8.19%
Too much alcohol can cause uterine cervical cancer	284	8.64%
Smoking cigarette increase my chances of CC	284	8.64%
Having many sex partners increases risk	285	8.67%
Total of frequencies	3285	100.00%

Table 3: Responses to psychosocial factors influencing uptake of cervical screening.

Psychosocial factors	Yes	Yes %	No	No %
Unaffordable cost of screening	262	91.9	23	8.1
Fear and discomfort of the procedure	257	90.2	28	9.8
Fear of adverse effect of pap smear	239	83.9	46	16.1
Inaccessibility to cervical screening service	191	67	94	33
Fear of lack of privacy and confidentiality	168	58.9	117	41.1
Lack of support from spouse	37	13	248	87
Discouraged by colleagues	9	3.2	275	96.5
Religion forbids screening	-	-	285	100
Community taboo towards screening	73	25.6	212	74.4
Nature of work will not allow	285	100	-	-
Attitude of health workers puts me off	144	50.5	141	49.5
Don’t believe screening is a means for prevention	38	13.3	247	86.7
Fear of being stigmatized when I am found screening	39	13.7	246	86.3

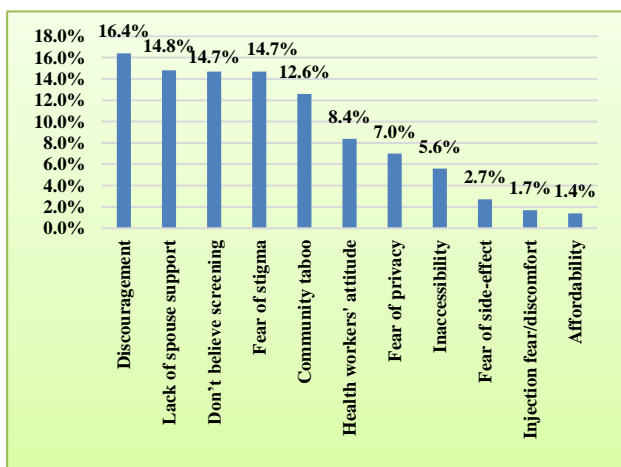


Figure 1: Relative frequencies of 'No' responses to psychosocial factors.

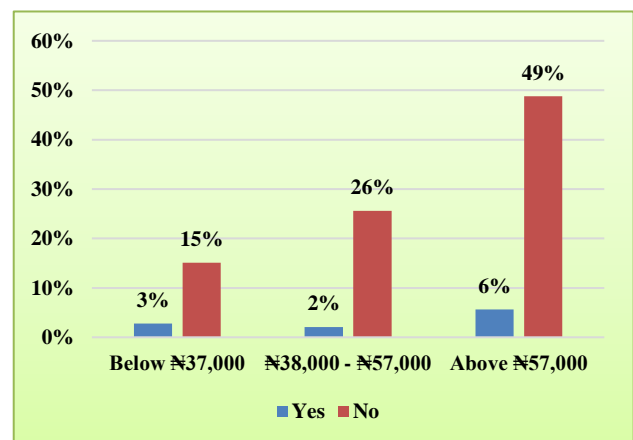


Figure 2: Percentage distribution of responses to cervical screening into stratified income groups- relative frequencies out of 100%.

On further analysis of affordability, respondents were stratified into income groups and subsequent evaluation of cervical screening show that uptake of was not different between income groups, whereas 'No' responders linearly increased with monthly income (Figure 2 and 3).

On evaluation of significant association between knowledge and acceptance of cervical cancer screening, some significance was observed (Table 4). Significant association is also observed in some, but not all psychosocial factors (Table 5).

Table 4: Pearson X² of knowledge with acceptance of cervical screening.

Knowledge	CC Screening			X ²
		Yes	No	
†Have you heard of cervical cancer?	Yes	30	248	0.844
	No	0	7	
‡What is cervical cancer?	Yes	30	183	11.334*
	No	0	72	
‡Signs of cervical cancer	Yes	30	203	7.483
	No	0	52	
‡How to detect cervical cancer?	Yes	27	44	75.935*
	No	3	211	
‡Causes of cervical cancer	Yes	29	153	15.637*
	No	1	102	
†Can cervical cancer be prevented?	Yes	30	241	1.732
	No	0	14	
‡How to prevent cervical cancer?	Yes	29	94	34.963*
	No	1	161	

†Based on correct [yes] or [no] response, ‡Based on choosing the correct option, *Statistically significant (p < 0.01).

Table 5: Pearson X² of psychosocial factors with acceptance of cervical screening.

Psychosocial factors	Screened for CC			Chi square
		Yes	No	
Unaffordable cost of screen	Yes	21	241	1.99
	No	0	23	
Inaccessibility of cervical screening	Yes	3	188	28.519*
	No	18	76	
Fear of adverse effect of pap screening	Yes	12	227	11.955*
	No	9	37	
Fear of discomfort of pain in screening	Yes	21	236	2.47
	No	0	28	
Fear of lack of privacy	Yes	5	163	11.567
	No	16	101	
Lack of support from spouse to undergo screening	Yes	0	37	3.382
	No	21	227	
Discouraged by friends to undergo screening	Yes	0	10	0.742
	No	21	254	
Religion forbids cervical screening	Yes	0	0	Constant
	No	21	264	
Family or community taboo against screen	Yes	2	71	3.08
	No	19	193	
Schedule of work will not allow screen	Yes	21	264	Constant
	No	0	0	
Attitude of health workers put me off screening	Yes	5	139	6.473*
	No	18	123	
Don't believe screening as a means of prevention	Yes	0	38	3.488
	No	21	226	
Fear of stigmatization	Yes	1	38	1.528
	No	20	226	

*Statistically significant (p < 0.01)

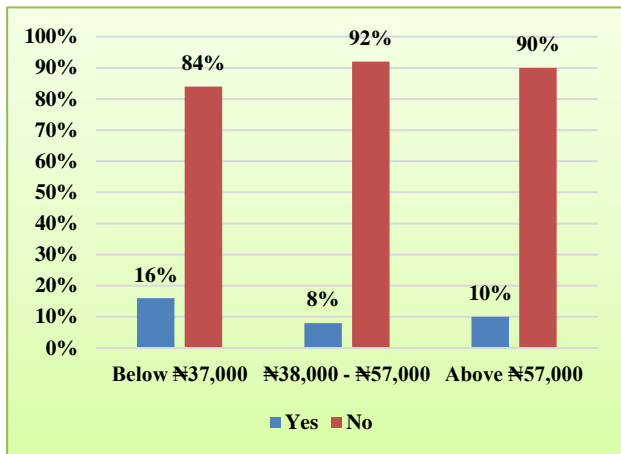


Figure 3: Percentage distribution of responses to cervical screening into stratified income groups- absolute frequencies within income subgroups.

DISCUSSION

This study investigated the level of acceptance of cervical screening as well as the perceptions and psychosocial factors of women who are civil servants in Delta State capital city of Asaba. It has been indicated in part one of this series that 89.5% have not had cervical screening and 84.2% agreed that they will like to be screened. The latter comprises 94% (240/255) of those who have not screened; and emphasize that 13% of all respondents, including some of those who have screened before, are unwilling to go for screening (Table 1). On perception of susceptibility (Table 2), it was observed that:

- About half (48.8%) of the participants know that regular cervical screening early diagnosis and intervention.
- Less than half of the respondents are perceive being multiparous, overweight or a woman, and having uncircumcised husband as risk factors for cervical cancer. Indeed, only 7.7% is aware that being a woman is risk factor.
- While passive or second smoking is a risk of cervical cancer; virtually all respondents (99.6%) are aware of the risk of active smoking whereas only about half (54.4%) of them know about passive smoke.¹⁸

The observations agree in part with the results of a similar study that was apparently conducted within the state.⁶ Report indicates even less proportion of the women have been screened for cervical cancer as well as lower level knowledge and willingness to go for screening. However, it is pertinent to point out that while present study was ministry-stratified samples of civil servants and strictly in the State's capital city, the report of Ohaeri et al, involved multistage sampling technique at suburban cities. A report from another State in Nigeria had also report a much lower level of knowledge and perception.¹²

Cultural and religious beliefs had been cited as notable factors.^{5,13,19} However, our findings did not agree that religion is a factor among the civil servants who participated in this study, especially as 100% of the respondents answered 'No' to "religion forbids screening". Instead, what is probably a novel finding is that all participants responded conversely to 'nature of work' as a limiting factor. Further, many respondents opined that better facilities including provision of female personnel for confidentiality reasons (59%), closeness for accessibility (67%), improved procedure (90%) and lower cost (92%) will improve utilization (Table 3). A crosschecking reverse analysis show that those who disagree with affordability as a problem were fewest (1.4%), while inaccessibility is forth and community taboo vis-à-vis culture comes in the middle of the pack of presumable barriers (Figure 1). It had been reported that ignorance of locations of the screening service centres buoyed by lack of referrals by clinicians were the reasons for not screening.²⁰ Therefore, our observation of high concern over accessibility is supported; and reiterates the need for cervical service facilities to be made affordable and closer to the people.¹⁰

Our result seems to confound affordability when viewed between stratified income levels (Figure 2). Solely looking at the relative frequency distribution would mislead into erroneous conclusion that the women at the highest income level are doing better than those at the lowest earning cadre. Yet, a closer look will reveal that the relative frequency on this occasion more reflects subgroup sizes. The absolute frequencies show that 16% of the lowest income earners have accepted cervical screening compared to 10% of topmost income earners. This observation of non-statistical significance tends to imply that affordability is less of the problem, hence confounding the 92% response indicating lower cost. There is report in the literature indicating that affordability may not be among the top three common reasons for non-uptake of cervical screening, hence our interpretation.¹⁹

The result shows very positive association or significance between acceptance of cervical screening and some knowledge (Table 4). In particular, knowledge of what cervical cancer is; the causes; how to detect and prevent it are significantly associated ($p < 0.01$). Mere hearing about the disease, or knowing it can be prevented, and knowledge of the signs are not significantly associated with uptake of the screening service. This observation is in agreement with the report for Ahmed et al, that their study participants exhibited high motivation, yet a fair knowledge and poor practice.²¹

In the context of knowledge, attitude and practice-whereby knowledge is power and attitude is motivation driven by belief; it is said that "intentions work via planning to change behaviour and planning can work by developing habits".²²

It is also said that motivation increases the desire to change, but action plan i.e. intension enables the motivated person.²³ This relevance to behavioural change here is that in addition to knowing what cervical cancer is, the women's knowledge of how to detect and prevent it constitutes significant capacities necessary to develop intention enroute enabling a motivated individual to accept the screening services. Hence, this report agrees with the clarion call that intensive awareness is required in the general population, especially among those who are less likely to know about cervical cancer and screening.²⁴

CONCLUSION

This study assessed the level of acceptance, perception and psychosocial factors of cervical cancer screening among women who are civil servants in the state's capital city. Results show that level of acceptance is low, and nature of work is the greatest psychosocial factor impeding the uptake. While affordability appears to be confounding and statistically insignificant, accessibility showed statistical significance. These call for the siting of cervical service centres to be considered with a view to make them closer to the working class women in Delta State, Nigeria.

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REFERENCES

- Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *C CA Cancer J Clin.* 2018;68(6):394-424.
- World Health Organization. Cervical Cancer. Available at: <https://www.who.int/cancer/prevention/diagnosis-screening/cervical-cancer/en/>.
- Torre LA, Islami F, Siegel RL, Ward EM, Jemal A. Global cancer in women: Burden and trends. *Cancer Epidemiol Biomarkers Prev.* 2017;26(4):444-57.
- Mboumba Bouassa RS, Prazuck T, Lethu T, Jenabian MA, Meye JF, Belec L. Cervical cancer in sub-Saharan Africa: a preventable noncommunicable disease. *Expert Rev Anti Infect Ther.* 2017;15(6):613-27.
- Isa Modibbo F, Dareng E, Bamisaye P, Jedy-Agba E, Adewole A, Oyenyin L, et al. Qualitative study of barriers to cervical cancer screening among Nigerian women. *BMJ Open.* 2016;6(1):e008533.
- Ohaeri B, Ebunu P, Ndikom C. Psycho-social factors influencing cervical cancer screening and Human Papilloma Virus vaccination acceptance among female civil servants in Delta State, Nigeria. *J Global Oncol.* 2018;4(Supplement 2):21s.
- Mbachu C, Dim C, Ezeoke U. Effects of peer health education on perception and practice of screening for cervical cancer among urban residential women in south-east Nigeria: a before and after study. *BMC Womens Health.* 2017;17(1):41.
- Chigbu CO, Onyebuchi AK, Onyeka TC, Odugu BU, Dim CC. The impact of community health educators on uptake of cervical and breast cancer prevention services in Nigeria. *Int J Gynaecol Obstet.* 2017;137(3):319-24.
- Dodo AM, Sykes P, Powell C. Exploring the Barriers to Breast and Cervical Cancer Screening in Nigeria: A Narrative Review. *Afr J Reprod Health.* 2016;20(4):89-98.
- Adepoju EG, Ilori T, Olowookere SA, Idowu A. Targeting women with free cervical cancer screening: challenges and lessons learnt from Osun state, southwest Nigeria. *Pan Afr Med J.* 2016;24:319.
- Chigbu CO, Onyebuchi AK, Egbuji CC, Ezugwu EC. Experiences and unmet needs of women undergoing Pap smear cervical cancer screening: impact on uptake of cervical cancer screening in south eastern Nigeria. *J Cancer Edu.* 2015;30(1):81-5.
- Abiodun OA, Olu-Abiodun OO, Sotunsa JO, Oluwole FA. Impact of health education intervention on knowledge and perception of cervical cancer and cervical screening uptake among adult women in rural communities in Nigeria. *BMC Public Health.* 2014;14:814.
- Dareng EO, Jedy-Agba E, Bamisaye P, Isa Modibbo F, Oyenyin LO, Adewole AS, et al. Influence of Spirituality and Modesty on Acceptance of Self-Sampling for Cervical Cancer Screening. *PLoS One.* 2015;10(11):e0141679.
- Cervical cancer. Available at: <http://www.cancernetwork.com/cancer-management/cervical-cancer>.
- Waller J, Jackowska M, Marlow L, Wardle J. Exploring age differences in reasons for nonattendance for cervical screening: a qualitative study. *BJOG.* 2012;119(1):26-32.
- Ferdous M, Lee S, Goopy S, Yang H, Rumana N, Abedin T, et al. Barriers to cervical cancer screening faced by immigrant women in Canada: a systematic scoping review. *BMC Womens Health.* 2018;18(1):165.
- Chorley AJ, Marlow LAV, Forster AS, Haddrell JB, Waller J. Experiences of cervical screening and barriers to participation in the context of an organised programme: a systematic review and

- thematic synthesis. *Psycho-Oncol.* 2017;26(2):161-72.
18. Min KJ, Lee JK, So KA, Kim MK. Association between passive smoking and the risk of cervical intraepithelial neoplasia 1 in Korean Women. *J Epidemiol.* 2018;28(1):48-53.
 19. Aboyeji PA, Ijaiya M-DA, Jimoh A-GA. Knowledge, attitude and practice of cervical cancer as screening procedure for cervical cancer in Ilorin, Nigeria. *Trop J Obstet Gynaecol.* 2004;21(2):114-7.
 20. Adefuye PO. Knowledge and practice of cervical cancer screening among female professional health workers in a sub-urban district of Nigeria. *Nigerian Med Pract.* 2006;50(1):19-22.
 21. Ahmed SA, Sabitu K, Idris SH, Ahmed R. Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria. *Niger Med J.* 2013;54(5):316-9.
 22. Johnston M. Using behaviour change theory and techniques in implementation research. In: The 4th Biennial Society for Implementation Research Collaboration conference; Seattle: SIRC 2017.
 23. Dixon D, Johnston M. Health behaviour change Competency Framework. Available at: www.healthscotland.com/documents/4877.aspx.
 24. Ayinde OA, Ogunbode OO, Adebayo OJ. Determinants of cervical cancer knowledge and its utilization of screening among a Nigerian female population. *Trop J Obstet Gynecol.* 2005;22(1):21-4.

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