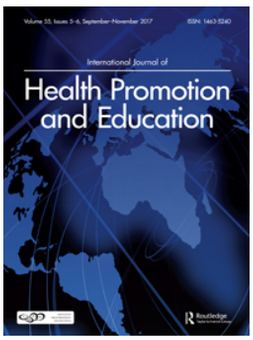

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Effects of educational intervention on women's knowledge and uptake of cervical cancer screening in selected hospitals in Ibadan, Nigeria

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ABSTRACT

This study evaluated the effects of an educational intervention (EI) on women's knowledge and uptake of cervical cancer screening (CCS) services. A quasi-experimental study, conducted in the antenatal clinics of eight hospitals in Ibadan, Nigeria. The hospitals were randomly clustered into four in intervention group (IG) and four in control group (CG), and 846 women were selected in the two groups using Systematic random sampling at baseline and post-intervention (PI). Data were collected using a structured questionnaire. The women in the IG received educational intervention provided by hospital nurses who were exposed to an educational programme previously. Data were analysed using descriptive statistics and χ^2 at $p < 0.05$. The mean age for women was 28 years ±5.8. The respondents' awareness of CC at baseline was IG: 12.9% and CG: 18.2% but this increased to 71.5% in IG and 22.1% in CG with net intervention effect (NIE) of 54.7% ($p < 0.0001$), knowledge of the causative organism (NIE < 37%, $p < 0.0001$), sexual intercourse as mode of transmission (NIE 53.7%, $p < 0.001$). Screening for early detection of cervical cancer (NIE 75.6%, $p < 0.001$), awareness of where to receive screening (NIE 64.1%, $p < 0.001$). There was only a very slight increase in uptake of CCS from 1.4% at baseline to 3.6% in the IG and 2.1 to 2.3% in the CG. Over, 53.5% said unavailability of services was a major hindrance to their screening uptake. Cervical cancer screening knowledge improved in the intervention group but uptake only improved slightly with the intervention. Educational intervention is a useful tool for improving knowledge of Cervical Cancer Screening.

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Cervical cancer; educational intervention; knowledge; screening; uptake

Introduction

Cervical cancer is one of the leading causes of cancer deaths in women in many developing countries like Nigeria (WHO/ICO Information Centre on HPV and Cervical Cancer 2010; World Health Organization 2013). Evidence of decline in incidence has been observed from

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countries like the United States, where there are established screening protocols (Kim et al. 2008). All sexually active women are at risk of developing cervical cancer (WHO/RHR and Johns Hopkins Bloomberg CCP 2008; Ogundipe and Obinna 2010). The risk seems to be increased with smoking and having multiple sexual partners or early age of exposure to sexual intercourse (Bayo et al. 2012; Ojong and Oluwatosin 2012).

Screening for early changes still remains an important preventive measure even after vaccination (Hariri et al. 2011). Many of the developing countries do not have structured National cervical cancer screening programmes (Adanu et al. 2010). Furthermore, cervical cancer screening services are poorly utilized and awareness is very low in these countries (Wright et al. 2011; Nwozor and Oragudosi 2013; Perlman et al. 2014). Interventions are urgently needed to improve the awareness and screening but such studies are few in developing countries including sub Saharan Africa (Finocchario-Kessler et al. 2016). Some studies have tested health education interventions in Nigeria among female teachers (Adamu, Abiola, and Ibrahim 2012), market women (Wright, Kuyinu, and Faduyile 2010) and women in rural communities (Abiodun et al. 2014) with considerable success. At primary care level, a South African study that tested the effect of community health workers on cervical cancer screening failed to find significant improvements in screening uptake by women (Tum, Maree, and Clarke 2013). Pender's Health Promotion Model was used as the theoretical framework for this study. The model focuses on three areas: individual characteristics and experiences, behaviour-specific cognitions and affect, and behavioural outcomes (Berman et al. 2008). The theory notes that each person has unique personal characteristics and experiences that affect subsequent actions (George 2011). The theory assists in understanding the major determinants of health behaviours as a basis for behavioural counselling to promote healthy lifestyles (Pender, Murdaugh, and Parsons 2011).

The health promotion model (HPM) indicates that each person has unique personal characteristics and experiences that affect subsequent actions. The set of variables for behavioural-specific knowledge and affect have important motivational significance. These variables can be modified through nursing actions/interventions (Berman et al. 2008). Health promoting behaviour is the desired behavioural outcome and is the end point in the HPM (Pender, Murdaugh, and Parsons 2011). Cervical cancer screening is known to be a health behaviour that improves reproductive and general health status of women.

The present study was designed to examine the effects of educational intervention on women's knowledge and uptake of cervical cancer screening services as well as factors influencing uptake.

Materials and method

Research design

The study adopted a quasi-experimental design that consisted of pre-test/post-test experimental and control groups. The study evaluated the effect of cervical cancer screening information on knowledge and uptake the services among women utilizing maternal health services in Ibadan, Oyo State. The respondents in the groups were comparable, as they were all women within childbearing age that utilized maternal health services and were from similar types of social and geopolitical locations. Respondents in the intervention group were exposed to the intervention programme. The pre- and post-intervention results were

compared to determine the effects of the intervention. The cohorts for the intervention group and control group were the hospitals, while different sets of women attending the various facilities at the different periods of the study were recruited in both groups. The independent variables were the sociodemographic characteristics, educational intervention and perceived barriers while the dependent variables were awareness, knowledge, willingness to utilize cervical cancer screening services and uptake of screening services.

Study setting

The study was carried out in four General Hospitals and four Primary Health Centres (PHCs) in Ibadan, Southwest Nigeria. In selecting the PHCs, four Local Government Areas (LGAs) out of the 11 LGAs were selected first and the PHC with the highest patient turnover and staff strength in the LGA was purposively selected from each LGA. The General Hospitals were selected based on their location and patronage by those seeking maternal and child health services. The only tertiary institution in the state was not included because it is not comparable to any of the groups, since the study utilized intervention and control groups.

Intervention group hospitals

Secondary Facilities in IG were Jericho Nursing Home and General Hospital, Moniya and at primary level, Oniyanrin PHC and Alafara PHC

Control group hospitals

The Secondary Facilities were Adeoyo Maternity Hospital and St Mary's General Hospital while the primary health centres were Agbogbon PHC and Apete PHC.

Study population

Women attend antenatal clinic in the selected Hospitals. Different sets of women participated at baseline and post intervention. The recruitment period was 4-week long, for each period of the study so as to cover all the groups since, majority of the women were on two weekly visits. The various hospitals had client attendance of between 50 and 350 weekly. The total weekly population of 1060 was multiplied by two to get the actual available population. Thus, the total study population of women was 2120.

Sample size determination

The minimum sample size required for detecting a difference of 10% improvement between the experimental and control groups at 90% power and a type 1 error of 5% was calculated. A total of 452 women per group was calculated with 904 for both groups both intervention and control groups. Hence, total sample size for women was 904.

Sampling

Systematic random sampling was used to select respondents at each hospital. The sampling interval used for the selection was $K = 2$. The distribution of the respondents is as follows: intervention sample size was 417 women while the control group sample size was 419 women. Total number of participants was 836 out of the proposed 904 which was a response rate of 92.5% while attrition was 7.5%. Attrition was as a result of decline to continue after initial consent by very few of the women immediately after recruitment.

Intervention

The educational intervention was in the form of focused health information on cervical cancer and screening given to women attending antenatal clinics by the nurses in the clinic. The nurses were already trained and sensitized on the need to provide such information through an intervention programme held in the experimental group facilities. The health teachings were given to the cluster of women on the clinic days in the intervention group and they received the information in groups. Flex charts with comprehensive information on cervical cancer were used by the nurses in providing the information on cervical cancer in the clinics while the women in the control group were not exposed to such information.

Instrument development

The major instrument used for this study was a validated structured questionnaires for women (SQW). This was designed from reviewed literature. It was an interviewer-administered questionnaire based on the literacy ability of the women, comprised of both open and close-ended questions. It consists of the following sections on socio-demographic data; awareness and knowledge of cervical cancer screening; uptake of cervical cancer screening services; barriers to uptake of screening services. One major question addressed awareness of cervical cancer; 14 items were used to assess knowledge of cervical cancer while uptake of cervical cancer screening was one question with yes or no answer as well as willingness to screen for cervical cancer; hindrances to uptake of cervical cancer screening had eight questions. The correlation coefficient was computed to ensure stability and internal consistency using Cronbach's coefficient alpha and score obtained was 0.70.

Ethical consideration

Approval for this study was obtained from the Research Ethics Committee of the Oyo State Ministry of Health reference No AD 13/479/85. The participants were duly informed about the procedure adopted in the study. The study was undertaken with total confidentiality and information provided by respondents was not disclosed to others. Involvement in the study was voluntary and informed consent forms were attached to copies of the questionnaire to ensure that consent was duly obtained from participants.

Data collection

The selected hospitals were divided into experimental and control groups. Pre-intervention questionnaire was administered to the selected women attending antenatal clinics and this formed the baseline data. The women in the intervention group were then exposed to information on cervical cancer provided by the nurses using charts with information on cervical cancer and its prevention measures. Post-intervention questionnaire was administered six months after commencement of the intervention to both IG and CG women attending antenatal clinic at that time.

Data analysis

The data collected from 846 respondents were found suitable for analysis at pre-intervention and post-intervention levels, 417 women in IG and CG was 419. Baseline and post intervention data were compared to determine the effect of the intervention. The data collected were sorted and analysed using descriptive and inferential statistics. Awareness was evaluated by the answer of Yes or No. There were 14 items that assessed knowledge, each correct answer had 1 mark while wrong answer was 0. Therefore, knowledge was scored and categorized as follows: Low = <4, Fair = 5–8, High = >9. The total was 14. Also, uptake was evaluated through Yes or No question of ever had screening. Net intervention effect (NIE) was tested using χ^2 statistics at $p < 0.05$. The NIE evaluated the significant percentage difference between the intervention group and control group at baseline and post-intervention.

Results

Socio-demographic characteristics of the respondents

Women's socio-demographic data at baseline and post-intervention (IG and CG) shown on Table 1 reveals that the women's socio-demographic characteristics, especially age, marital status, and educational levels, were not significantly different at baseline and post-intervention. Majority of the women were aged between 21 and 30 years and their mean age were 27.9 ± 5.8 years at baseline and 28.0 ± 5.3 years at PI. They had mainly secondary school level of education, were mainly traders who earned ≤₦10,000 naira (≈$50)/month. Over 90% of them were married.

Awareness and knowledge of cervical cancer among women

At baseline, 12.9% IG and 18.2% CG respondents were aware of cervical cancer while at post-intervention, 71.5% IG and 22.1% CG respondents became aware of cervical cancer ($p < 0.001$) as seen on Table 2. Also, majority 94.2% (IG) and 83.0% (CG) of women had poor knowledge at baseline while at post-intervention, 43.3 and 93.0% (IG and CG) had poor knowledge on Table 2.

Table 1. Socio-demographics of women in the intervention and control groups at baseline and post intervention.

Baseline					Post intervention			
	IG (%)	CG (%)			IG (%)	CG (%)		
Variable	*N* = 417	*N* = 429	χ^2	*P* value	*N* = 417	*N* = 429	χ^2	*P* value
Age (years)	51(12.2)							
<20	258(61.9)	24(5.6)	13.278	0.004	45(10.8)	34(7.9)	4.419	
21–30	106(25.4)	272(63.4)			247(59.2)	275(64.1)		
31–40	2(0.5)	128(29.8)			123(29.5)			
					2(0.5)	115(26.8)		
>41					Mean =	5(1.2)		
Mean =	27.9 ± 5.8	5(1.2)				28.0 ± 5.3		0.220
Educational level								
Primary and below	50(12.0)	57(13.3)			59(14.1)	40(9.3)		
	218(52.3)	197(45.9)	3.437	0.179	203(48.7)	228(53.1)	7.132	0.068
Secondary	149(35.7)	175(40.8)			153(36.7)	161(37.5)		
Above secondary								
Marital status								
Single	21(5.0)	23(5.4)			16(3.8)	16(3.7)		
Married	396(94.9)	406(94.6)	3.845	0.146	401(96.1)	413(96.3)	1.038	0.595
Occupation								
Civil servant	69(16.5)	84(19.6)	17.658	0.001	69(16.5)	63(14.7)	12.623	
Unemployed	44(10.6)	80(18.6)			31(7.4)	47(11.0)		
					279(66.9)	298(69.5)		
Traders	286(68.6)	257(59.9)			23(5.5)			
Public servant	18(10.6)	8(1.9)				18(4.2)		0.013
Income (₦)								
≤10,000	278(66.7)	297(69.2)	4.943	0.176	207(49.6)	209(48.7)	9.098	0.059
11,000–20,000	61(14.6)				66(15.8)			
					30(7.2)	88(20.5)		
					61(14.6)	36(8.4)		
21,000–30,000	38(9.1)	74(17.2)				38(8.9)		
>30,000	40(9.6)	31(7.2)						
		27(6.3)						

Table 2. Respondents' awareness and knowledge of cervical cancer.

Baseline					End line			
	IG (%)	CG (%)	χ^2	*P* value	IG (%)	CG (%)	χ^2	*P* value
Awareness of cervical cancer	54(12.9)	78(18.2)	4.396	0.036	298(71.5)	95(22.1)	206.7	0.001
Yes	363(87.1)	351(81.8)			119(28.5)	334(77.9)		
No	393(94.2)	356(83.0)			181(43.4)	399(93.0)		
Informed about cervical cancer in clinic								
Yes	39(9.4)	74(17.2)	11.394	0.001	230(55.2)	36(8.4)	214.5	0.001
No	378(90.6)	355(92.8)			187(44.8)	393(91.6)		
Knowledge								
High	1(0.2)	4(0.9)	26.463	0.001	39(9.4)	1(0.2)	242.802	0.001
Fair	23(5.5)	69(16.1)			197(47.2)	29(6.8)		
Poor								

Effect of educational intervention on women's awareness and knowledge of cervical cancer in IG and CG at baseline and PI

Table 3 showed the net intervention effect (NIE) on awareness of the women on cervical cancer was 54.7% ($p < 0.0001$). The net intervention effect (NIE) is the difference in the effect of intervention between the IG and CG at baseline an PI. Between baseline and PI, there was 58.9% increase in awareness in the IG while there was only 3.9% increase in the CG thus the difference in awareness between the IG and CG was 54.7%, i.e. IG 58.9% minus CG 3.9%. Also, knowledge of the causative organism had NIE = 37%, $p < 0.0001$, sexual intercourse as mode of transmission (NIE 53.7%, $p < 0.001$), multiple sex partners (NIE 49.5%, $p < 0.0001$), women at risk (NIE 57.5%, $p < 0.001$). Screening for early detection of cervical cancer (NIE 75.6%, $p < 0.001$), awareness of where to receive screening test (NIE 64.1%, $p < 0.001$) as seen on Table 3.

Uptake cervical cancer screening services

Willingness to utilize CCS services was high even at baseline in both groups. It significantly increased from 75.0% (IG) and 70.0% (CG) at baseline to 90.0% (IG) and 85.3% (CG) at PI, respectively. Uptake of CCS increased slightly from 1.4% at baseline to 3.6% in the IG and 2.1 to 2.3% in the CG at post intervention (Table 4).

Table 3. Effect of educational intervention on women's awareness and knowledge of cervical cancer in intervention group and control group at baseline and post-intervention.

	Intervention group			Control group				
Variable	Baseline *N* = 417	End line *N* = 417	Diff (%)	Baseline *N* = 429	End line *N* = 419	Diff (%)	NIE (%)	*P* value
Ever heard about cervical cancer	54(12.9)	298(71.5)	58.6	78(18.2)	95(22.1)	3.9	54.7	0.001
Eve informed about cervical cancer in clinic	39(9.4)	230(55.2)	45.8	74(17.2)	36(8.4)	−8.8	54.6	<0.001
Causative agent of cervical cancer	16(3.8)	158(37.9)	34.1	24(5.6)	11(2.6)	−3	37.1	0.001
Risk factors Sexual intercourse	32(7.7)	226(54.2)	46.5	67(15.6)	36(8.4)	−7.2	53.7	0.001
Early sex	0(0.0)	142(34.1)	43.1	14(3.3)	19(4.4)	1.1	33	0.001
Multiple sex partners	33(7.9)	194(46.5)	38.6	83(19.3)	36(8.4)	−10.9	49.5	<0.001
STIs	37(8.9)	101(24.2)	15.3	79(18.4)	35(8.2)	−10.2	25.5	0.001
Women at risk	23(5.5)	223(53.5)	48	67(15.6)	26(6.1)	−9.5	57.5	0.001
Peak age of incidence of cancer	10(2.4)	14(3.4)	1	17(4.0)	6(1.4)	−2.6	3.6	0.061
How often to screen	5(1.2)	130(31.2)	30	9(2.1)	8(1.9)	−0.2	30.2	0.001
Early detection	10(2.4)	272(65.2)	62.8	114(26.6)	59(13.8)	−12.8	75.6	0.001
Availability of vaccine for prevention	45(10.8)	229(54.9)	44.1	125(29.1)	39(9.1)	−20	64.1	0.001

Table 4. Women's uptake of cervical cancer screening.

Baseline					Post intervention			
Variables	IG (%) $N = 417$	CG (%) $N = 429$	χ^2	*P* value	IG (%) $N = 417$	CG (%) $N = 429$	χ^2	*P* value
Aware of where to screen	$N = 132$							
Yes	54(12.9)	78(18.2)	4.396	0.03	221(53.0)	68(15.9)	129.734	0.00
No	363(87.1)	351(81.8)			196(47.0)	361(84.1)		
Willingness to screen	$N = 612$				$N = 724$			
Yes	313(75.8)	299(71.5)	1.939	0.16	375(91.0)	349(85.3)	6.376	
No					37(9.0)			
	100(24.2)	119(28.5)				60(14.7)		0.01
Uptake of screening								
Yes	6(1.4)	9(2.1)	0.527	0.47	15(3.6)	10(2.3)	1.182	0.27
No	411(98.6)	420(97.9)			402(96.4)	419(97.7)		

Table 5. Perceived hindrances to the uptake of screening by women.

Variable	Intervention (%) $N = 417$	Control (%) $N = 429$	χ^2	*P* value
Unavailable services				
Yes	223(53.5)	180(42.0)	11.249	0.00
No	194(46.5)	249(58.0)		
Cost of obtaining service				
Yes	182(43.6)	163(38.0)	2.795	0.09
No	235(56.4)	266(62.0)		
Lack of decision-making ability				
Yes	107(25.7)	160(37.3)	13.25	0.00
No	310(74.30	269(62.7)		
Invasion of one's privacy				
Yes	73(17.5)	113(26.3)	9.62	0.00
No	344(82.5)	316(73.7)		
Lack of information about screening				
Yes	205(49.2)	262(61.1)	12.13	0.00
No	212(50.8)	167(38.9)		
Lack of support from husband				
Yes	129(30.9)	150(35.0)	1.55	0.21
No	288(69.1)	279(65.0)		
Fear of being infected				
Yes	99(23.7)	122(28.4)	2.418	0.12
No	318(76.3)	307(71.6)		
Distance from screening centre				
Yes	90(21.6)	91(21.2)	0.01	0.89
No	327(78.4)	338(78.8)		

Perceived hindrances to cervical cancer screening uptake

The major hindrances to uptake identified by women at post intervention on Table 5 were unavailable services, cost of services, lack of decision-making ability, invasion of privacy and lack of information on cervical cancer screening. The major hindrance that influenced uptake among women (53.5%) was non-availability of CCS services.

Discussion

The study was carried out among women attending antenatal clinics in the hospitals selected. This study sought to evaluate the difference made by the educational intervention, a in the study intervention group cluster on their knowledge and uptake of cervical cancer screening services.

Level of awareness and knowledge of cervical cancer screening among women in Ibadan

The study showed that cervical cancer awareness among the women attending ANC was very poor and majority had low level of knowledge at baseline, 94.2% (IG) and 83.0% (CG), though this improved at post intervention. This low level of knowledge is comparable to findings from other studies on awareness and knowledge of cervical cancer in Nigeria (Mbamara et al. 2011; Chigbu and Aniebue (2011); Nwozor and Oragudosi 2013). Among Malaysian women studied by Wong et al. (2009), only a few were aware that early detection saves life. Bayoumi et al. (2012) reported a study on Saudi young females' knowledge of cervical and breast cancer found their knowledge unsatisfactory. Mutyaba et al. (2007) reported that 'knowledge about cervical cancer among Ugandan women was very low'. A Systematic review on knowledge, awareness of cervical cancer, HPV and HPV vaccine and willingness and acceptability to vaccinate in sub Saharan Africa by Perlman et al. (2014) showed that the levels of knowledge of cervical cancer HPV and HPV vaccine were consistently low.

There was a significant difference in level of knowledge of cervical cancer between the women in experimental group and control group. Thus, the educational intervention improved the women's awareness and knowledge, especially in the intervention group. This finding was consistent with study carried out among Honduran women by Perkins et al. (2007) which utilized both community nurses and radio broadcast to disseminate information on cervical cancer and need for screening. The community based programme for women improved knowledge and screening behaviour among the women. Mutyaba et al. (2007) revealed that patients with low knowledge were not given adequate information on cervical cancer and screening.

The effect of the intervention on the women's level of uptake of cervical cancer screening services

The uptake was 6(1.4%) for intervention group and 9(2.1%) for control group at baseline. Their actual uptake was 15(3.6%) intervention group and 10 (2.3%) in control group. This is similar to a study by Wright et al. (2011) carried out among market women in Lagos State, Nigeria in which Knowledge improved but uptake of cervical cancer screening remained poor at post intervention. Also, study by Abiodun et al. (2014) among Adult women in Ogun state, Nigeria only showed a slight increase in the proportion of women who had undertaken cervical screening from 4.3 to 8.3% ($p < 0.038$).

Their willingness to uptake cervical cancer screening services was very good both even at baseline 75.8% (IG) and 71.5% (CG). This generally shows that women are really willing to uptake cervical cancer screening. Mbamara et al. (2011) reported that 80 (57.1%) of the women attending gynaecology clinics in a tertiary level medical care centre in South-eastern

Nigeria agreed that they would like to undertake cervical cancer screening, while 60 (42.9%) would decline the cervical cancer screening test. Over 85% of the women had never been screened even though they have been attending gynaecology clinics.

The factors that influence uptake of screening services among women

The possible hindrances to the uptake of screening by women in the study were mainly, unavailability services, cost of obtaining service, and lack of information about screening. Others were lack of decision-making ability, invasion of one's privacy. Unavailability of screening services has been a major challenge to uptake of screening tests. Also, lack of information was indicated by 49.2% and 61.1% of the respondents (intervention and control groups). Abiodun et al. (2014) reported that 'The major reason stated by the women for not having had cervical screening done was lack of awareness about cervical cancer and screening'. Findings from a study on barriers to effective uptake of breast and cervical cancer screening services among black minority ethnic (BME) groups living in Brent and Harrow by Thomas, Saleem, and Abraham (2005) also revealed poor knowledge, underlying health and cultural beliefs, attitudes, language and unhelpful attitudes of health professionals. Hilton et al. (2003) reported increased age, non-white race/ethnicity, low educational level, low income, decreased access, insufficient funding, and unfavourable attitudes towards screening as barriers. There is need to ensure that these factors especially unavailable services are worked upon to facilitate uptake of screening services.

Pender's Health Promotion Model was used to explain relationship between the variables central to this study on effect of educational intervention on cervical cancer screening knowledge and uptake. The study was designed using the three focus areas of the health promotion model which are individual characteristics/experiences, behaviour-specific cognitions and affect, behavioural outcomes. The women in the study had their individual characteristics and received information on cervical cancer screening which increased their awareness and knowledge which led to positive behavioural intention but the final behavioural outcome which is the screening uptake was still poor. The model emphasized the need to eliminate factors that could hinder services utilization. The major constraint common among all the intervention group facilities was non-availability of screening services. Also, the women's physiological condition of pregnancy could have also contributed to low uptake.

Limitation

The study is limited by the fact that the respondents were recruited from the antenatal clinic with the physiological state of pregnancy. Antenatal clinic provides a good opportunity to talk to women on various health issues but it limited uptake. Even though cervical cancer screening could be carried out during pregnancy, most women prefer having it after puerperium.

Implications for further research

Since the study really improved knowledge as well as willingness to uptake cervical cancer screening services but actual uptake remained poor

- There is need for further research on the reasons for difference between increased awareness, willingness to be screened and the actual uptake.
- The barriers identified in the study need to be further explored like unavailability services, cost of obtaining service, and lack of information about screening, lack of decision-making ability, perceived invasion of privacy.
- The study should be carried out using non-pregnant women in order to determine actual uptake.

Summary and conclusion

Cervical cancer is one of the common cancers in women that contribute to mortality. It is preventable through screening to detect precancerous lesions and appropriate treatment which is given before the lesions develop into invasive cervical cancer. Cervical cancer screening uptake was low among the women but improved slightly with the intervention in the intervention group. Willingness to uptake screening was very high but uptake was low. The possible hindrances to the uptake of screening by women in the study were mainly, unavailability services, cost of obtaining service and lack of information about screening.

Educational intervention is a useful tool for improving knowledge of Cervical Cancer Screening among women. Cervical Cancer screening uptake remained poor despite the nurse-led educational intervention. This has shown that information without removing the barriers may not yield the desired effects. Government and health-related agencies should empower nurses to render cervical cancer services at all levels in order to make the services easily accessible as this is the major barrier to screening uptake.

Disclosure statement

No potential conflict of interest was reported by the authors.

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