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Outcome of Educational Programme on Cervical Cancer Risk Perception and Screening Intention among Market Women in Ibadan, Oyo State

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Abstract: *Cervical cancer remains a major public health challenge in low- and middle-income countries, where poor awareness, low risk perception, and limited screening uptake contribute significantly to its burden. This study assessed the outcome of an educational programme on cervical cancer risk perception and screening intention among market women in Ibadan, Oyo State, Nigeria. A quasi-experimental pre-test and post-test design was adopted, involving 184 participants selected through multistage sampling and assigned to intervention and control groups. Data were collected using a validated semi-structured questionnaire and analysed using descriptive and inferential statistics at a 0.05 level of significance. At baseline, participants in both groups demonstrated poor risk perception and low screening intention. Only 20.7% of the intervention group and 8.7% of the control group had ever undergone cervical cancer screening, while 27.2% and 29.3%, respectively, expressed intention to screen. Following the educational intervention, risk perception significantly improved in the intervention group, with mean scores increasing from 32.1±10.6 to 40.7±9.0 compared to 33.5±10.2 in the control group (t=5.305, p=0.0001). Similarly, screening intention increased from 27.2% to 65.2% in the intervention group, compared to a marginal rise from 29.3% to 31.5% in the control group (p=0.0001). Ignorance was identified as the major barrier to screening uptake. The study concludes that educational intervention is effective in improving cervical cancer risk perception and screening intention among market women.*

Keywords: Cervical cancer, Risk perception, Screening intention, Educational intervention, Market women

INTRODUCTION

Cervical cancer is a widespread global health concern and still appears to disproportionately impact low- and middle-income nations of the world. It is now the fourth most prevalent cancer in women all over the globe, with about 660,000 new cases and 350,000 deaths reported in 2022 (WHO, 2024) . Although it is mostly preventable by vaccination, screening, and early treatment, more than 85 percent of deaths related to cervical cancer are experienced in resource-constrained environments, especially in sub-Saharan Africa, where access to preventive services is still subpar (Latest Global Cancer Data, 2021) . Cervical cancer is not only a health problem, but also a symptom of deep health disparities in the regions. It is estimated that unless more rigorous measures are taken, the global incidence may reach almost 700,000 cases and 400,000 fatalities by 2030, which will further increase existing disparities (WHO, 2020).

The burden is disproportionately felt in Sub-Saharan Africa, whereby the incidence and mortality rates are much higher than those in high-income countries. The prevalence of cervical cancer in Africa is approximated as 34 per 100,000 women, and the death rate is 23 per 100,000 per year (WHO, 2020) . Worryingly, over 80 percent of cases in the area are identified at advanced stages, thus limiting the treatment options and decreasing survival rates (Arbyn et al., 2020) . In West Africa, the issue is still acute, with the age-standardized incidence of 31.5 per 100,000 women, as well as a mortality rate of 17.9 per 100,000 (Black et al., 2018) . Such statistics reveal the systemic weaknesses in early detection and prevention measures, which makes the context-specific interventions urgent.

Nigeria is one of the most populous African countries; it is a country that is a great contributor to the cervical cancer burden in the region. It is the second most prevalent cancer in Nigerian women and the second cause of cancer-related deaths in women aged 15-44 years (WHO, 2023) . According to the latest statistics, every year, about 12,075 women are diagnosed, and almost 7,968 succumb to the disease (Human Papillomavirus Cancers Fact Sheet, 2023) . A high percentage of patients, more than 70% of them, come to the hospital at its progressive invasive stages, which severely affects the prognosis (Okolie et al., 2022) . This situation is mostly due to the high prevalence of cervical cancer in Nigeria caused by long-term infection with high-risk Human Papillomavirus (HPV) types, with type 16 and 18 being the most common (Human Papillomavirus and Related Cancers Fact Sheet, 2023) and constitute approximately 66.9% of cases.

Despite the fact that cervical cancer is preventable, weak health systems, absence of structured screening programmes, and poor awareness of the population are factors that prevent its control in Nigeria. In contrast to developed nations where well-organized screening programmes have greatly decreased both incidence and mortality by up to half in the last thirty years (Landy et al., 2020) , Nigeria continues to rely on informal and haphazard screening methods (Anyasi et al., 2020) . The geopolitical area of Oyo State, which is situated in the southwestern region, has limited access to screening services (Anyasi et al., 2021) . This means that a good number of women are not screened and thus, they are diagnosed late and have a bad prognosis.

Risk perception is one of the most important factors of cervical cancer prevention behaviours.

Risk perception is the perceived risk of developing a disease that is subjective to an individual and is of key importance in affecting health-seeking behaviour. There is an indication that most women in Nigeria do not perceive themselves as at risk of cervical cancer, which greatly diminishes their interest in undergoing screening programmes (Binka et al., 2019; Fentie et al., 2020; Ducray et al., 2021; Ba et al., 2021) . This issue is further aggravated by misconceptions and cultural beliefs. As an example, research has revealed that a considerable number of women think that they are immune to cervical cancer, they are spiritually shielded, or they are not at risk because of their perceived moral behaviours (Olubodun et al., 2019) . These beliefs are detrimental to prevention initiatives and play a role in the continuously low utilization of screening services.

Nigerian empirical data also point out that cervical cancer awareness may not necessarily lead to screening uptake. A research conducted by Gana et al. (2018) showed that despite the increase in awareness of market women on the topic of Pap smear testing, the actual adoption of this practice was low . This implies that in addition to awareness, interventions need to target other cognitive and behavioural constructs like risk perception and screening intention. Equally, a significant percentage of women had never been screened despite some awareness, which was found to highlight a lack of knowledge-to-action relationship (Egbonrelu et al., 2018; Abdurrahman et al., 2022) in studies in Lagos and other regions of Nigeria.

The willingness or readiness of an individual to be screened, which is referred to as screening intention, is a major predictor of the real screening behaviour. Research conducted across the world indicates that there are different degrees of screening intention in women. Indicatively, in Addis Ababa, 47.0% of women were willing to receive screening (Demas et al., 2024), and 46.7% of the willingness was reported in Ethiopia (Desta et al., 2022) . Conversely, other settings have witnessed higher rates of willingness, including 77.1% in Malawi and more than 84% in China (Atusaye et al., 2024; Zhang et al., 2023) . The willingness of different population groups in Nigeria differs, with the health professionals having relatively higher rates than the general population (Owolabi and Adejumo, 2021; Maitanmi et al., 2023)). These differences highlight how education, awareness, and socio-cultural factors affect screening intention.

Educational programmes have been cited as the effective strategies to enhance both risk perception and screening intention. Systematic reviews provide evidence that health education interventions can greatly enhance the adoption of cervical cancer screening (Agide et al., 2018) . Likewise, specific interventions in the low-resource environment have shown impressive knowledge and awareness improvement. As an example, an educational intervention resulted in a rise in knowledge levels, with 11.7 percent of participants increasing to 97 percent in Delta State, Nigeria (Omowhara et al., 2022) . The results emphasize the role of organized educational programmes in sealing the knowledge gaps and encouraging preventive practices. Market women comprise a very critical target population to such interventions. They are usually lower socioeconomic groups and they might have limited access to health information and services. Research has indicated that women in this group are lowly aware, do not perceive risk, and do not screen (de Sanjose & Holme, 2019) . As they are central to families and communities, enhancing their health knowledge and behaviours can have a wide-reaching impact on the health of populations. Nevertheless, the interventions which are aimed at this population should be culturally sensitive, accessible and responsive to their needs and

situations.

In Ibadan, Oyo State, anecdotal reports and clinical experience indicate that cases of cervical cancer are on the rise with many being diagnosed at late stages. The cause of this trend might be due to low awareness, low risk perception, and insufficient screening practices of women. Although screening techniques like Pap smear are available, there is low uptake especially among informal sector employees like market women. This highlights the importance of specific educational interventions that are not only informative but also transform perceptions and encourage behaviour change.

It is on this basis that this research aims to assess the result of an educational intervention on risk perception and screening intention on cervical cancer in market women in Ibadan, Oyo State. The study determined the risk perception of cervical cancer among market women in both intervention and control groups in Ibadan at baseline and after the intervention, and also examined the effect of the intervention on their intention to undergo cervical cancer screening by comparing pre- and post-intervention outcomes across the two groups.

METHODS

The study adopted a quasi-experimental design with a pre-test and post-test approach to evaluate the effect of an educational programme on cervical cancer risk perception and screening intention among market women in Ibadan, Oyo State . Participants, comprising market women within the reproductive age group, were assigned into intervention and control groups based on comparable community characteristics. While the intervention group received the educational programme, the control group did not receive any intervention. Assessments were conducted at baseline and repeated two weeks after the intervention to measure changes in participants' risk perception and intention to undergo cervical cancer screening. The target population consisted of women aged 25–60 years residing in Ibadan, while the study population specifically included market women within this age range operating in selected markets such as Oje, Bodija, Aleshinloye, and Apete. These markets were purposively relevant due to their large concentration of women engaged in informal economic activities, making them suitable for evaluating community-based health interventions.

A total sample size of 184 respondents was determined using an appropriate statistical formula for comparing two independent groups, with proportional allocation across the selected markets to ensure representativeness. A multistage sampling technique was employed, involving random selection of local government areas, markets, and eventual assignment into intervention and control groups, followed by systematic sampling to recruit eligible participants. Inclusion criteria required that participants be market women aged 25–60 years without a history of cervical cancer or hysterectomy and who consented to participate, while those who did not meet these criteria were excluded. Data were collected using a semi-structured questionnaire designed to capture socio-demographic characteristics, cervical cancer risk perception, and screening intention. The instrument underwent rigorous validation through expert review to ensure content relevance and clarity, while reliability was established through a test-retest procedure, yielding a Cronbach's alpha coefficient of 0.716, indicating acceptable internal consistency.

The process of data collection in the study was structured and systematic to achieve accuracy, consistency and participation of the participants in the process of intervention. Three research assistants were selected and well trained on how to register the participants, administer questionnaires and how to handle the study instruments. Sensitization of leaders in the market and registration of participants with a unique identification number were done so as to enable good tracking and follow up. A structured questionnaire was used to gather baseline data in the pre-intervention phase to evaluate cervical cancer awareness, knowledge, risk perception, and screening intention in both the intervention and control groups. The intervention group was then given a structured educational programme in the form of interactive lectures with backing of charts and posters whereas the control group was not given any intervention at this point. The teaching programme was structured into two-week modules on the anatomy of the cervix, risk factors, signs and symptoms, and prevention of cervical cancer with participatory learning to improve the knowledge.

A post-test test was done after two weeks, to check the changes in the risk perception and screening intention of the participants after the intervention and the control group also had a post-test after which they would receive the educational programme later. The research was carried out in discrete stages, such as sensitization, pilot testing, baseline assessment, implementation of intervention, and assessment of post-intervention, which guaranteed methodological rigor. IBM SPSS version 23.0 was used to analyze the data; descriptive and inferential statistics were used. Findings were summarized using descriptive statistics (means, frequencies, and percentages) and inferential statistics (independent sample t-tests and chi-square tests) at a level of significance of 0.05. The perception of risk was determined through a composite scoring system according to the answers to positive and negative items where scores above the middle point were considered positive perception. The screening intention was measured by specific items of the questionnaire, and statistical tests were applied to show the impact of the intervention on the willingness of the participants to receive cervical cancer screening.

Ethical approval for the study was obtained from the Oyo State Ministry of Health Institutional Review Board, with ethical number NHREC/OYOSHRIEC/10/11/22. Introductory and approval letters were presented to market leaders before data collection. Participants were informed about the study's aims and provided informed consent, with assurance of voluntary participation and the right to withdraw at any time without consequences. Confidentiality was strictly maintained through anonymized data collection and secure storage. The study posed no risk to participants, as no invasive procedures were involved, while its potential benefit included increased awareness and improved cervical cancer screening practices.

RESULTS

The demographic characteristics of participants in both the intervention and control groups in Table 1 were comparable, indicating baseline homogeneity between the groups. The majority of participants were within the age range of 41–60 years, with mean ages of 46.9±10.9 and 46.1±10.7 for the intervention and control groups respectively, and no significant difference observed ($p=0.587$). Most respondents were married in both groups, and secondary education was the most common level attained. Similarly, the majority had parity of 3–4 children, and

Christianity was the predominant religion across both groups. Statistical analysis using chi-square tests showed no significant differences in age distribution (p=0.424), marital status (p=0.373), educational level (p=0.548), parity (p=0.956), and religion (p=0.277), suggesting that the two groups were demographically similar and suitable for comparison in assessing the effect of the intervention.

Table 1: Distribution of Demographic Characteristics of the participants

Variable	Intervention (%)	Control (%)	Total	X^2	P value
Age range in (Years)					
≤30	11(12.0)	7(7.6)	9.8		
31-40	23(25.0)	32(34.8)	29.9	3.872	0.424
41-50	25(27.2)	19(20.7)	24.0		
51-60	33(35.9)	34(37.0)	36.5		
Marital Status					
Single	7(7.6)	6(6.5)	7.1		
Married	68(73.9)	77(83.7)	78.8		
Separated	7(7.6)	4(4.3)	6.0		
Widow	10(10.9)	5(5.4)	8.2	3.120	0.373
Level of education					
No formal schooling	6(6.5)	10(10.9)	8.7		
Primary	11(12.0)	15(16.3)	14.2	2.119	0.548
Secondary	49(53.3)	45(48.9)	51.1		
Tertiary	26(28.3)	22(23.9)	26.1		
Parity					
0	4(4.3)	4(4.3)	4.3		
1-2	23(25.0)	22(23.9)	24.5	0.321	0.956
3-4	49(53.3)	47(51.1)	52.2		
>4	16(17.4)	19(20.7)	19.0		
Mean age	46.9±10.9	46.1±10.7	46.5±10.8	.557	.587
Types of religion					
Christianity	64(69.6)	57(62.0)	65.8	1.133	0.277
Islam	28(30.4)	35(38.0)	34.2		

As presented in Table 2, a considerable proportion of market women in both the control and intervention groups at baseline did not recognize key cervical cancer risk factors such as being sexually active (33.7% vs 35.9%), early marriage (39.1% vs 37.0%), prolonged oral contraceptive use (27.1% vs 23.9%), and low socioeconomic status (16.1% vs 27.2%). Nevertheless, some participants correctly identified multiple sexual partners (32.6% vs 21.8%), HPV infection (19.5% vs 22.8%), and early sexual debut before age 16 (10.8% vs 17.4%) as risk factors, while only a few acknowledged grand multiparity (12.0% vs 5.5%) and tobacco smoking (20.7% vs 8.7%). Following the educational intervention, there was a marked improvement in risk perception among participants in the intervention group, as the proportion who did not recognize being sexually active, early marriage, and low socioeconomic status as risk factors declined substantially to 19.6%, 21.7%, and 23.9%, respectively. Concurrently, there was a notable increase in the proportion of participants who correctly identified multiple sexual partners (58.7%), grand multiparity (34.8%), HPV infection (76.1%), tobacco smoking (41.3%), and early sexual debut before age 16 (50.0%) as cervical cancer risk factors, indicating the effectiveness of the educational programme in enhancing knowledge and perception.

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Table 2: Cervical cancer risk perception among market women in intervention and control group

ITEMS	Stages	Intervention					Control				
		SA	A	D	SD	NI	SA	A	D	SD	NI
I am not at risk of getting cervical cancer despite the fact that I am sexually active	Pre	26(28.3)	7(7.6)	11(12.0)	6(6.5)	42(45.7)	23(25.0)	7(7.6)	26(28.3)	17(18.5)	19(20.7)
	Post	17(18.5)	1(1.1)	39(42.4)	15(16.3)	20(21.7)	23(25.0)	7(7.6)	26(28.3)	17(18.5)	19(20.7)
Early marriage reduces cervical cancer risk.	Pre	33(35.9)	1(1.1)	9(9.8)	8(8.7)	41(44.6)	32(34.8)	3(3.3)	14(15.2)	13(14.1)	30(32.6)
	Post	20(21.7)	0	52(56.5)	3(3.3)	17(18.5)	32(34.8)	3(3.3)	14(15.2)	13(14.1)	30(32.6)
Women who had sexual intercourse early in life are immune against cervical cancer.	Pre	20(21.7)	2(2.2)	10(10.9)	8(8.7)	52(56.5)	27(29.3)	0	14(15.2)	11(12.0)	51(55.4)
	Post	12(13.0)	4(4.3)	42(45.7)	2(2.2)	21(22.8)	27(29.3)	0	14(15.2)	11(12.0)	51(55.4)
HIV infection decreases risk of cervical cancer.	Pre	10(10.9)	0	15 (16.3)	7(7.6)	60(65.2)	10(12.0)	0	18(19.6)	10(10.9)	53(57.6)
	Post	1(1.1)	0	25(27.2)	6(6.5)	55(59.8)	5(5.4)	3(3.3)	18(19.6)	10(10.9)	53(57.6)
Alcohol consumption helps fight against cervical cancer.	Pre	3(3.3)	1(1.1)	21(22.8)	9(9.8)	58(63.0)	5(5.4)	3(3.3)	22(23.9)	15(16.3)	47(51.1)
	Post	6(6.1)	0	28(30.4)	15(16.3)	48(52.2)	10(12.0)	0	22(23.9)	15(16.3)	47(51.1)
Low socio-economic status reduces women's exposure to cervical cancer	Pre	25(27.2)	0	16(17.4)	4(4.3)	47(51.1)	8(8.7)	5(5.4)	9(9.8)	11(12.0)	59(64.1)
	Post	20(21.7)	2(2.2)	22(23.9)	3(3.3)	45(48.9)	8(8.7)	5(5.4)	9(9.8)	11(12.0)	59(64.1)
Long time oral contraceptive use protects a woman against cervical cancer.	Pre	20(21.7)	2(2.2)	24(26.1)	5(5.4)	41(44.6)	20(21.7)	4(4.3)	17(18.5)	16(17.4)	35(38.0)
	Post	19(20.7)	1(1.1)	17(18.5)	17(18.5)	38(41.3)	20(21.7)	4(4.3)	17(18.5)	16(17.4)	35(38.)

ITEMS	Stages	Intervention					Control				
		SA	A	D	SD	NI	SA	A	D	SD	NI
Human papilloma virus(HPV) infection increases risk of cervical cancer.	Pre	20(21.7)	1(1.1)	22(23.9)	8(8.7)	41(44.6)	13(14.1)	4(4.3)	9(9.8)	11(12.0)	55(59.8)
	Post	68(73.9)	2(2.2)	1(1.1)	1(1.1)	20(21.7)	13(14.1)	4(4.3)	9(9.8)	11(12.0)	55(59.9)
Sexual intercourse before 16 years increases the risk of cervical cancer	Pre	13(14.1)	3(3.3)	19(20.7)	9(9.8)	48(5.2.2)	5(5.4)	2(2.2)	14(15.2)	11(12.0)	60(65.2)
	Post	41(44.6)	5(5.4)	6(6.5)	1(1.1)	39(42.4)	5(5.4)	2(2.2)	14(15.2)	11(12.0)	60(65.2)
Tobacco smoking increases a woman's risk of cervical cancer	Pre	6(6.5)	2(2.2)	11(12.0)	11(12.0)	62(67.4)	17(18.5)	4(4.3)	8(8.7)	9(9.8)	54(58.7)
	Post	33(35.9)	5(5.4)	10(10.9)	4(4.3)	40(43.5)	17(18.5)	4(4.3)	8(8.7)	9(9.8)	54(58.7)
Women with multiple sexual partners are at higher risk of getting cervical cancer	Pre	19(20.7)	1(1.1)	13(14.1)	8(8.7)	51(55.4)	28(30.4)	2(2.2)	12(13.0)	10(10.9)	40(43.5)
	Post	44(47.8)	10(10.9)	9(9.8)	4(4.3)	25(27.2)	28(30.4)	2(2.2)	12(13.0)	10(10.9)	40(43.5)
Grand multiparity increases risk of cervical cancer.	Pre	2(2.2)	3(3.3)	20(21.7)	17(18.5)	50(54.3)	9(9.8)	2(2.2)	12(13.0)	34(37.0)	35(38.0)
	Post	31(33.7)	1(1.1)	10(10.9)	10(10.9)	40(43.5)	9(9.8)	2(2.2)	12(13.0)	34(37.0)	35(38.0)
Cervical cancer is the main cause of cancer related death among women.	Pre	20(21.7)	0	16(17.4)	4(4.3)	52(56.5)	21(22.8)	7(7.6)	8(8.7)	9(9.8)	47(51.1)
Cervical cancer is the main cause of cancer related death among women.	Pre	20(21.7)	0	16(17.4)	4(4.3)	52(56.5)	21(22.8)	7(7.6)	8(8.7)	9(9.8)	47(51.1)
	Post	56(60.9)	3(3.3)	5(5.4)	5(5.4)	23(25.0)	21(22.8)	7(7.6)	8(8.7)	9(9.8)	47(51.1)
Cervical cancer screening test helps women to know the status of the cervix on time.	Pre	25(27.2)	2(2.2)	22(23.9)	4(4.3)	39(42.4)	37(40.2)	17(18.5)	7(7.6)	3(3.3)	28(30.4)
	Post	68(73.9)	4(4.3)	7(7.6)	2(2.2)	11(12.0)	37(40.2)	17(18.5)	7(7.6)	3(3.3)	28(30.4)
I am willing to encourage my female family members to have cervical screening test due to the risk of cervical cancer	Pre	34(37.0)	4(4.3)	28(30.4)	4(4.3)	22(23.9)	22(23.9)	8(8.7)	10(10.9)	16(17.4)	36(39.1)
	Post	66(71.7)	7(7.6)	6(6.5)	4(4.3)	9(9.8)	22(23.9)	8(8.7)	10(10.9)	16(17.4)	36(39.1)

Table 3 showed no significant difference in the risk perception of cervical cancer at baseline among the intervention and control groups. Meanwhile,the post intervention mean was higher when compared with the baseline.

Table 3 Comparing the mean cervical cancer risk perception score between the intervention and control groups at pre and post test

Variables	Stages/ control	Group	Mean	Std. Deviation	Range	t-test	P-value
Cervical cancer risk perception score	Baseline	IG	32.1	10.6	15.0-62.0	0.646	0.519
		CG	33.1	10.2	15.0-53.0		
	Post intervention	IG	40.7	9.0	21.0-63.0	5.305	0.0001
		CG	33.5	10.2	15.0-53.0		

Table 4 shows that prior to the intervention, only a small proportion of participants had ever undergone cervical cancer screening, with 20.7% in the intervention group and 8.7% in the control group. At baseline, intention to undergo screening was relatively low and comparable between groups, with 27.2% in the intervention group and 29.3% in the control group expressing willingness, while only about one-fifth were willing to undergo the test even at a cost exceeding ₦5000. However, following the intervention, there was a substantial increase in screening intention among participants in the intervention group, rising from 27.2% to 65.2%, compared to only a marginal increase in the control group from 29.3% to 31.5%. Similarly, willingness to pay for screening improved significantly in the intervention group from 19.6% to 48.9%, whereas only 21.7% of participants in the control group expressed such willingness, indicating a positive effect of the educational programme on screening intention.

Table 4: Market women cervical cancer screening intention

Items	Intervention Group				Control Group			
	Pre (n = 92)		Post (n = 92)		Pre (n = 92)		Post	
	Yes N(%)	No N(%)	Yes N(%)	No N(%)	Yes N(%)	No N(%)	Yes N(%)	No N(%)
Ever had test	19(20.7)	73(79.3)	19(20.7)	73(79.3)	8(8.7)	84(91.3)	8(8.7)	84 (91.3)
Intention for cervical cancer screening test.	25(27.2)	67(72.8)	60(65.2)	32(34.8)	27(29.3)	65(70.7)	29(31.5)	63(68.5)
Affordability of the cost (≥5000naira)	18(19.6)	74(80.4)	45(48.9)	47(51.1)	20(21.7)	72(78.3)	20 (21.7)	72 (78.3)

Table 5 illustrates the participant's reasons for not going for the cervical cancer screening test. The primary reason why participants in the intervention group 36(49.3) and control group 50(59.5) chose not to get screened for cervical cancer out of ignorance.

Table 5: Participants reasons for non-uptake of cervical screening test

	Items	**Intervention**		**Control**	
		Pre test N(%)	**Post test N(%)**	**Pre N(%)**	**Post N(%)**
Reason for not having been screened		N=73	N=73	N=84	N=84
	Fear	21(28.8)	16(21.9)	22(26.2) 29(34.5)	
	lack of money	12(16.4)	15(20.5)	10(11.9) 8(9.5)	
	Ignorance	36(49.3)	6(8.2)	50(59.5) 43(51.2)	
	lack of time	5(6.8)	35(47.9)	2(2.4)	4(4.8)

Table 6 shows the effect of educational interventions on market women's intention to get screened for cervical cancer. At baseline, 25 (27.2%) and 28(30.4%) of the participants in intervention and control group had the intention to get screened for cervical cancer. Post intervention, 60(65.2%) of the participants showed willingness for cervical cancer screening against 29(31.5%) in control group p=0.0001.

Table 6: Effect of intervention on intention for cervical cancer screening test among market women

		Baseline				Post intervention			
		Intervention group	**Control**	**X^2**	**Pvalue**	**Intervention**	**Control**	**X^2**	**Pvalue**
Intention for cervical cancer screening test	Yes	25(27.2)	27(29.3)	0.239	0.745	60(65.2)	29(31.5)	22.303	0.0001
	No	67(72.8)	65(70.7)			32(34.8)	63(68.5)s		

Table 7 indicates that at post-intervention, market women in the intervention group had a higher mean cervical cancer risk perception score (40.7±9.0) compared to those in the control group (33.5±10.2). The independent sample t-test showed this difference to be statistically significant (t = 5.305, p = 0.0001), suggesting that the educational intervention had a significant positive effect on improving participants' risk perception of cervical cancer.

Table 7: Independent sample t-test on market women cervical cancer risk perception between the intervention and control groups at post-test

Variables	Stages	Group	Mean	Std. Deviation	Range	t-test	P-value
Cervical cancer risk perception score	Post intervention	IG	40.7	9.0	21.63.0	5.305	0.0001
		CG	33.5	10.2	15.0-53.0		

DISCUSSION OF FINDINGS

The findings of this study revealed that more than half of the participants in both the intervention and control groups had a negative perception of cervical cancer risk at baseline. A substantial proportion of the women held erroneous beliefs about their susceptibility, with about one-third assuming they were not at risk despite being sexually active. Additionally, factors such as early marriage, early sexual debut, low socioeconomic status, and prolonged use of oral contraceptives were incorrectly perceived as protective rather than predisposing factors. These misconceptions align with the findings of Dozie et al. (2021), who similarly reported that a majority of participants did not perceive themselves to be at risk of cervical cancer. This is a critical public health concern, as low perceived susceptibility may discourage women from engaging in preventive behaviours such as screening and avoidance of known risk factors.

Conversely, only a small proportion of participants demonstrated adequate risk perception by correctly identifying factors such as human papillomavirus (HPV) infection, multiple sexual partners, and the burden of cervical cancer as a leading cause of cancer-related mortality among women. This contrasts with the findings of Fawzy et al. (2023), where a larger proportion of participants exhibited positive risk perception. Following the educational intervention, however, there was a marked improvement in participants' cervical cancer risk perception. This finding is consistent with previous studies conducted in various settings, including Uganda, Nigeria, Ghana, India, and Egypt, which all reported significant improvements in risk perception after educational interventions (Ijezie et al., 2022; Ebu et al., 2019; Thahiraibrahim et al., 2021; Fawzy et al., 2023; Mereth et al., 2024). The observed improvement can be attributed to the effectiveness of the structured educational programme in correcting misconceptions and enhancing awareness.

Furthermore, the study showed that only 20.7% of participants in the intervention group and 8.7% in the control group had undergone cervical cancer screening prior to the study. Although these figures indicate relatively low screening uptake, they are higher than those reported in some previous studies. For instance, studies by Azuogu (2019) in Abakaliki and Omowhara (2022) in Calabar reported even lower screening rates, while El Sayed et al. (2022) in Saudi Arabia found that none of the participants had ever been screened. These variations may reflect differences in awareness levels, access to screening services, and sociocultural influences across study settings.

CONCLUSION

In conclusion, the study demonstrated that market women initially had poor cervical cancer risk perception and low intention to participate in screening, largely influenced by misconceptions and lack of awareness. However, the educational intervention proved effective in improving participants' understanding of cervical cancer risk factors, correcting false beliefs, and enhancing their willingness to undergo screening. The intervention also addressed key barriers such as ignorance, which was a major reason for non-uptake of screening. Overall, the findings highlight the critical role of targeted educational programmes in promoting positive health behaviours and improving preventive practices among women, particularly in low-resource settings like Ibadan, Oyo State

Recommendations

1. Regular, structured cervical cancer education should be integrated into community settings such as markets to improve women's risk perception, correct misconceptions, and promote preventive behaviours.
2. Government and health authorities should expand access to low-cost or free cervical cancer screening services, particularly targeting underserved populations like market women.
3. Cervical cancer awareness and screening promotion should be incorporated into routine primary health care services, including outreach programmes and women's health clinics.
4. Market leaders and trained peer educators should be actively involved in disseminating information and mobilizing women to participate in cervical cancer screening programmes.

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