

Experiences of Women about Cervical Cancer Screening after Educational Intervention in Ikwo Local Government Area, Ebonyi State, Nigeria.

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Abstract

Background Globally, cervical cancer screening (CCS) allows for the early diagnosis of precancerous cervical lesions and early stage malignancies. CCS is not widely practiced in underdeveloped and developing countries due to numerous reasons and barriers. Women's experiences about CCS have not been exclusively studied, most especially in Nigeria.

Purpose This study explored the experiences of women who attended CCS after educational intervention in Ikwo Local Government Area, Ebonyi State, Nigeria.

Methods A qualitative research approach was used in this study using a purposive sampling technique to select 30 respondents who went for CCS after educational intervention. Semi structured- in-depth interview was carried out under the phenomenological approach. The interview was conducted face to face using audio recording, transcribed and coded for thematic analysis.

Results Three themes and nine subthemes were generated from the data. Result revealed experiences that may motivate or discourage women from subsequent screening, such as delay in attending to clients, lack of screening materials, physical discomforts during and after the screening, and attitude of the health professionals.

Conclusion Being aware of such experiences could help the nurses address them in order to increase the interest of the women in CCS. Based on the findings, the researcher recommended that the National health policymakers should formulate policies to ensure that the Ministry of Health incorporates CCS education as one of the health topics provided by health workers during women's gynaecological visits.

Keywords: Cervical cancer screening, Women's experiences, Educational intervention, Phenomenology, Nigeria / Ebonyi State.

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Introduction

In the modern era, the world is heading towards the rising epidemic of non-communicable diseases (NCDs). Out of these NCDs, cancer is the second leading cause of death globally [15]. Cervical cancer screening is an effective method for detecting abnormal cells in the cervix. It involves checking for abnormal cells on the cervix that could lead to cancer, and it is a significant part of secondary prevention for cervical cancer. These tests look out for precancerous changes before they become cancerous, which can then be treated to prevent the disease. Regular screening is essential for reducing the risk of advanced cervical cancer and during this screening, there are experiences that may motivate or discourage women from subsequent screening such as lack of female screeners, delay in attending to clients, lack of screening materials, physical discomforts during and after the screening, and attitude of health professionals [1]. Cervical cancer screening (CCS) is the process by which cells of the cervix are tested to find any abnormalities that could become cancer, or to detect early-stage cancer itself [14]. The two main types of tests are the Pap test (or Pap smear), which looks for abnormal cells, and the Human papilloma virus (HPV) DNA test which checks for the virus that causes most cervical cancers. These tests are important because symptoms often do not appear until the cancer is in advanced form [17].

Detecting and removing abnormal cervical cells can prevent cervical cancer. The results of the test help to provide practitioners with an accurate measure of the health of the cervix – the entrance to the uterus [4]. The cervix is the opening to the uterus and is located at the top of the vagina. It is covered by a thin layer of tissue made up of two types of cells: the "skin-like" cells called squamous cells and the glandular cells that produce the mucus in the cervix [19].

Cervical cancer occurs when cervical cells become abnormal and, over time, grow out of control, the cancer cells invade deeper into the cervical tissue. Cervical cancer is caused by persistent infection with certain types of human papilloma virus (HPV) infection [13, 9]. In rare cases, HPV can be spread by genital contact without sexual intercourse. This may include genital contact with someone of the same sex. In addition, although HPV is the main cause of cervical cancer, it is not the only cause. Other factors, such as smoking and HIV infection, etc, can affect the risk for getting HPV and developing cervical cancer. Cervical cells which are infected initially develop some pre-cancerous changes, which in some women may progress to become cancer. In advanced cases, cancer cells can spread to other organs of the body [23]. Globally, cervical cancer is the fourth most frequent malignancy in women, with an estimated 604,000 new cases and 342,000 deaths in 2020 [7]. It is the second most common cancer in women in the South-East Asia Region (SEAR) and becoming a major cause of cancer deaths among women in low and middle-income countries (LMICs) including Nepal [18]. This high incidence of cervical cancer is as a result of poor knowledge and attitude with resultant poor uptake of screening [15,23]. Hence, there is need for massive educational intervention to increase the knowledge and

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attitude of women towards cervical cancer screening globally, in order to reduce the high incidence and mortality associated with the disease [24]. An investigation was carried out on women's knowledge regarding the practice of cervical cancer screening services and found very low rate results. While another investigation found inadequate knowledge and negative attitude of women regarding cervical cancer screening [8, 3]. Another reported that increased knowledge and use of instructional teachings which were employed among the study participants on effective screening programs have significantly reduced the incidence of cervical cancer in the United Kingdom (UK) after the introduction of national screening programme [22]. Nigeria has not had a great deal of success in implementing effective cervical cancer screening till date [13]. In Nigeria, screening for cervical cancer is an opportunistic procedure which is dependent on the woman's initiative and/or that of her health care provider. This leads to inappropriate utilization of screening facilities and lack of follow-up of abnormal results. There is currently no mass screening program for the detection of cervical cancer in Nigeria, services are only available in teaching hospitals and are not adequately utilized [4].

Role of a Nurse in CCS

The role of a nurse before CCS: Studies emphasized the importance of midwives as health educators and role models in the community [5]. Nurses educate members of the community, whether through home visits or in community venues, or through telephone in some settings, about the cancer and how to recognize its warning signs, such as abnormal vaginal bleeding, offensive vaginal discharge etc [24]. Nurses help identify those in the community who are eligible for CCS and educate them about the availability and purpose of cancer screenings [23]. Nurses also, because of their proximity to their communities, can help identify individual and health system barriers to CCS [5]. If CCS is being offered through self-collected human papilloma virus (HPV) tests, nurses play a role in distributing tests and instructing women on self-collection as well as next steps (WHO, 2020). Other steps are: community outreach to identify those eligible for screening, explore beliefs and experiences about cancer, identify barriers to cancer screening, and also educate them on CCS, HPV test self-collection [2].

The role of a nurse during CCS: Center for Disease Control [6] revealed that once the patients reach the health center, the nurse assesses their health history, cervical cancer risk factors and symptoms, if they are due for screening. These include both early diagnosis of cancer, that is, identification of cancer warning signs, as well as screening of asymptomatic women. Nurses are involved in the full range of cervical cancer screening modalities, including Pap smear collection, visual inspection of the cervix after acetic acid application (VIA), augmented in some settings by digital cervicography, and also clinician-collected HPV sampling [12].

The role of a nurse after CCS: Following screening exams, Nurses play an important role in again educating the patients and coordinating an ongoing care [24]. The nurses deliver the result

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of the screening test and explain the next steps if the screening test is abnormal, and when to repeat screening if the test is normal. In some settings, nurses are trained to perform diagnostic tests or treatment following abnormal screening tests [12]. For example, nurses perform colposcopy for an abnormal cervical screening in Uganda, Costa Rica, and India [24]. In the single-visit approach for CCS, nurses perform treatment following a positive (abnormal) VIA (Visual inspection of the cervix after acetic acid application) exam, with either cryotherapy or thermal ablation [21]. This was notable particularly in the African region. Nurses also refer patients for screening or for further diagnostic intervention.

Other roles of the nurse in CCS: Throughout the screening process, nurses play an important role in coordinating care. There were only two studies (in Turkey and Malaysia) that reported formal nurse navigation roles. However, many of the nurses' roles in patient tracking and followup to remind patients of appointments and to check that they attended their follow-up appointments are aspects of helping patients to navigate the screening and diagnostic pathway [10]. Other steps are called reminder systems, family counseling, health education and decision aids.

Aim of the study

This study explored the experiences of women about cervical cancer screening after educational intervention in Ikwo Local Government Area, Ebonyi State, Nigeria.

Study objective

To explore the experiences of women who had CCS post-intervention.

METHOD

Research Design

An exploratory-descriptive qualitative (phenomenological) design was adopted in this study to understand the subjective experience as it relates to the social and psychological phenomenon of women. The focus of the exploratory design is to gain insight and familiarity for later investigations.

Setting

The research was conducted in Ikwo Local Government Area in Ebonyi State. It is situated on the eastern part of the state. The city has a land mass of approximately 500 square kilometers and shares a border with Abakaliki, Izzi and Ezza Local Government Areas as well as Cross River State. Alex Ekwueme Federal University Ndufu Alike Ikwo (FUNAI) is situated in Ikwo; it is one of the universities established by President Goodluck Jonathan. Ikwo is also the location of

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Ebonyi State College of Education Ndufu Echara. Ikwo local government area in Ebonyi State, Nigeria, comprises of 13 autonomous communities namely: Ekpanwudele, Ndufu Alike, Ekawoke, Uweka, Ndufu Echara, Okpoitumo, Indiegu Igbudu, Inyimagu, Echara, Amagu, Indiagu, Igbudu and Alike. The local government headquarters is at Onu-Ebonyi Echara. It comprises of 20 wards. Ikwo has a semi-tropical climate with abundant rainfall, leading to lush vegetation, thick forest, ponds, and small pools during the rainy season. It has land features like rock formation, the ikwo river and the cross river. They are believed to be descendants of Noyo and share common beliefs, customs and traditions with people of Abakaliki. They also celebrate igbo culture in various ways which include: Aji and Nefioha festivals among others. They speak Ikwo language that is closely related to Izii and Ezaa. But generally, they use Igbo to communicate outside their language group (Joshua project, https://joshuaproject.net). Population of men: 99, 855 and women: 115,114 (2024). [26].

Population of Study

The target population of the study included all the women who underwent cervical cancer screening after the educational intervention which amounted to 58 women. Those who were excluded from the study were women who did not go for cervical cancer screening test after the intervention programme, and those who were unwilling to partake in the study.

Sampling Technique

The study employed a purposive sampling technique to select 30 respondents from the study group, who went for CCS after SENIP.

Sample Size

The sample size was 30 respondents from the study group who went for CCS after the educational intervention (SENIP).

Instrument for Data Collection

A semi-structured interview guide designed by the researcher was used for the study. The interview guide has 4 sections. The first section has questions about participants' socio-demographic characteristics, while the other three sections collected data on participants' experiences before, during and after the screening.

A supportive-educative nursing intervention package (SENIP) was developed by the researcher guided by intensive literature review to help equip women with knowledge on cervical cancer and cervical cancer screening. This encouraged routine cervical cancer screening in order to curtail the incidence.

Procedure for Data Collection

A key Informant Interview (KII) guide and a digital voice recorder were used to collect the data. All these were to ensure that all responses were captured. A note-pad and pen were instituted for additional handwritten note for completeness.

Method of Data Analysis



Thematic content analysis was adapted for the study. It was used to find out the views, opinions, experiences, and values through the interview-guided transcript. The researcher was acquainted with the data by transcribing the audio recorder verbatim. In the second step, coding categories were determined based on the systematic structure to make replication easy and improve reliability. The data were analyzed in thematic content, and within and across codes were performed to identify recurring themes while collating all identical ones and sorting diverse codes to form potential themes. Also the code of content was determined by assigning a label to the text that has been analyzed, and the text can be a word or phrase. This helps in generation of themes and sub-themes.

Limitations of the Study

The researcher encountered the following constraints during the course of the study;

- 1. The literacy level of the participants necessitated the use of a local interpreter to relate with the respondents in their own different dialects.
- 2. It was difficult to coordinate the participants at the Local government area where the data were collected after the screening, which also necessitated the support of the women ward leaders to assemble the women back to the research centre.
- 3. Lack of cervical cancer screening centers in the communities, which seemed to discourage some of the participants from translating the acquired knowledge into practice, that is, prompt screening.

RESULTS

A total of 30 participants from the intervention group were used to explore the experiences of women who had CCS after the supportive education intervention package (SENIP).

Table 1: Socio-demographic data of the respondents on the effect of supportive education on experiences of women in Ikwo LGA.

Variable	Frequency (n= 30)	Percentage	
Age (Years)*			
18 - 24	7	23.3	
25 - 34	5	16.7	
35 —44	8	26.7	
45—54	6	20	
≥55	4	13.3	
Total	30	100	
Marital Status			
Single	7	23.3	
Married	18	60	
Widowed/Divorced	5	16.7	
Total	30	100	

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Religion			
Christianity	30	100	
Total	30	100	
Highest Level of			
Education			
Tertiary	6	20	
Secondary	12	40	
Primary	8	26.7	
No Formal Education	4	13.3	
Total	30	100	
Occupation			
Housewife	3	10	
Student/Apprentice	2	6.7	
Trader	18	60	
Civil Servant	5	16.7	
Unemployed	2	6.7	
Total	30	100	
Monthly Income			
(Naira)			
<50,000	6	20	
50,000-100,000	12	40	
1000,000-200,000	10	33.3	
>200,000	2	6.7	
Total	30	100	
Screened Personnel			
Male doctors	12	40	
Female doctors	8	26.7	
Midwives (female)	10	33.3	
Total	30	100	
Number of times			
screened			
First timers	27	90	
Second timers	3	10	
More than two timers	0	0	
Total	30	100	

^{*}u= 37. 58 SD= 12.03

Socio-demographic Characteristics of Participants for the Study

The socio-demographic characteristics of participants for the study were presented in table 1. The target populations of participants for the study were women who underwent CCS after the

educational intervention (SENIP). The mean age of the participants was 37.58 ± 12.03 . Majority 18 (60%) of the participants were married. The highest proportion 12 (40%) had secondary education as their highest level of education. Most of the participants 18 (60%) were traders, and majority 18 (60%) of them earned between 50,000 to 100,000 naira monthly. Among the health professionals who conducted the screening, male doctors had the highest proportion of 12 (40%). 27 (90%) of the screened participants were first-timers, while 3 (10%) were second-timers.

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Organization of themes and sub-themes

Three major themes were generated from the data. The major themes were grouped into subthemes and a total of nine (9) sub-themes were collated. To maintain anonymity, pseudonyms were used for each selected quote. The details have been presented in table 2.

Table 2: Organizational Themes and Sub-themes

THEMES	SUB-THEMES	
Pre-screening experiences	1 First time screeners	
	2 Waiting time for the screening	
	3. Insufficiency of screening materials	
Intra-screening experiences	1. Indifferent to male doctors conducting CCS	
	2. Physical discomfort associated with screening	
Post-screening experiences	1. Expectation of screening outcome	
	2. Waiting time for the screening result	
	3. Bleeding after screening	
	4. Intention to undergo re-testing	

Themes, Emerging Themes and Sub-Themes

Theme one: pre-screening experiences

First time screeners

Majority (90%) of the participants in this study were first-timers for the screening. They were afraid and anxious because it was their first experience. They complained that they were not at ease.

"It was my first time to do the screening, and I was afraid because I did not know how the screening would be done, but after going through I became less nervous".(R28, 42 years).

"I was a first-time screener and was anxious. I wanted to do the test as fast as possible, but it took time before I could do it due to unnecessary delays". (R2, 44 years).

"I was really anxious because it was my first time, but I was told by the nurse to find a way to relax, or chat with other as a way to divert my attention away from the screening". (R30, 41 years).

". I knew what to expect for the screening because it was not my first time, so I was not nervous". (R 14, 27 years).

Waiting time for the screening

Delays in accessing healthcare services have always been a challenge in most health facilities, especially in secondary and tertiary health facilities, and this can discourage patients or clients from accessing healthcare. These were some of the comments from respondents concerning delays or waiting for long before being screened;

"I went early to the hospital for the screening, but had to stay for several hours before being called upon in the first instance, not even for the screening". (R5, 58 years).

"Hey! I knew it was not going to be easy; I stayed over 7 hours before doing the screening because of unnecessary protocols". (R20, 45 years).

But on the contrary, some clients said they did not wait for long before doing the screening:

"Luckily I did not waste time in doing the screening; maybe because there were few people around the day I went for the screening". (R12, 56 years).

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"The process was so fast for me; I was taken to the screening unit immediately after examination by the midwife. I spent not more than 1 hour for the entire screening process". (R27, 19 years).

Insufficiency of screening materials

Insufficiency of screening materials was one of the awful or negative experiences encountered by the participants during the screening. Some of the women were asked to come back for the screening because of unavailability of screening materials. Majority (19) of the participants narrated their level of disappointment concerning this, the cost of transporting themselves back for the test, the psychological and physical stress involved;

"I was told to come back for the screening on a specified date because of shortage of test kits. It was not easy due to high cost of transportation from the village to town, and I had to pay for the screening too. It was even more painful because I had to leave my business to go back for the screening". (R10, 59 years).

"My screening was rescheduled for the next week due to lack of screening materials, and it was not really encouraging; I just managed to go back for the test. (R8, 46 years).

Theme two: intra-screening experience

Physical discomfort associated with screening

The physical discomforts associated with the screening according to the participants include excessive sweating during the screening; also fast heart beats and frequent urination before the screening. Also, few participants expressed that the speculum inserted caused them pain and pressure in the lower abdomen during the procedure. Their experiences include;

"Immediately it was my turn for the screening, my heart started beating fast, I felt an unnecessary urge to urinate due to nervousness. The midwife noticed I was very nervous, and tried to calm me down." (R8, 46 years).

"As I was about to go in for the screening, I started sweating profusely; maybe because it was my first time". (R11, 24 years).

"I experienced some pains and pressure in my lower abdomen when the speculum was inserted into my vagina during the screening. It was really an uncomfortable experience, but I was not so much disturbed because I was determined to do the test" (R7, 53 years).

Indifferent to male doctors conducting cervical cancer screening

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It is a regular observation that patients prefer to see a particular gender in the hospital, especially when their privacy will be invaded. In such situations, patients prefer healthcare professionals of same gender. In this study, most of the participants (40%) reported that they were screened by male doctors. Also, majority (60%) noted that they had no problem being screened by male professionals.

"I was not bothered when I knew I would be screened by a male doctor, after-all, it was a male doctor that delivered me of my two babies" (R19, 33 years).

"I was okay when I was told to meet a male doctor for the screening, because I always had issues with female doctors, I don't really know why". (R6, 40 years).

However, some participants responded that, they preferred the male doctors to the female ones due to the caring manner in which they attended to them.

"The male doctor that screened me was very caring and gentle compared to the female doctor that attended to me during my first screening". (R4, 37 years).

"As I met the male doctor in the screening room, my mind was just at rest, because from previous experiences in the hospital, male doctors are always very nice especially to females" (R 3, 21 years).

Theme 3: post-screening experiences

Expectations of the screening outcome

Majority of the participants were expecting the outcome to be negative because they were not having symptoms suggestive of cervical cancer.

"I expected the result to come out negative because I do not have symptoms; I just wanted to do the screening because of the teaching we got" (R29, 35 years).

"Even though I was experiencing mild vaginal discharge, I was certain it was just toilet infection and not cervical cancer." (R23, 51 years).

However, some participants were afraid because they had symptoms they felt were suggestive of cervical cancer;

"I was uncomfortable and thought it could be positive because I was having recurrent offensive watery vaginal discharge, and occasional mild vaginal bleeding". (R13, 59 years).

"It was really a nightmare for me thinking the result could come out positive because I was having persistent lower abdominal and vaginal pain". (R16, 20 years).

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Some participants stated that they had no expectation, and would accept whatever the outcome was;

"I told myself whatever the outcome was would be okay by me, and would help me plan ahead". (R26, 34 years).

"I did not bother about the outcome since it was a voluntary or routine test". (R19, 23 years).

Waiting time for screening results

CCS results usually take time to come out. Some participants were hoping that the result would come out early because the screening did not take time;

"I was told to come back for the result after 2 weeks, but it took almost 1 month for the result to be ready. It was frustrating" (R22, 39 years).

"It took time for the result to be ready, meanwhile the screening itself did not take up to 1hour".(R24, 30 years).

Few participants commented that they became more nervous and stressed out waiting for the result;

"It was very stressful waiting for long to get a result one thought would have been ready not long. In fact, I became very nervous". (R17, 52 years).

"I became very worried after 2 weeks when I was told the result would be ready. I was waiting for the nurse's call as promised, but all to no avail." (R9, 23 years).

Bleeding after screening

Some participants had mild vaginal bleeding after the screening procedure, and were monitored before they went home. They narrated their experiences below;

"Really, I had mild vaginal bleeding after the screening, but the nurse asked me to rest and monitored my vital signs, made sure I was okay before going home". (R25, 24 years).

"I had bleeding for two days after the screening. The first pad was really soaked, and afterwards it was mild and I used 4 extra pads in two days. The midwife said I should come back if the bleeding continued or became worrisome". (R15, 31 years).

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Intention to undergo retesting

This is a follow-up test that is usually done to determine if a person's condition has improved or as a confirmation of a result. Participants or clients with initial negative testing who need retesting may not feel comfortable going for retesting due to fear that the results might change. Majority of the participants agreed to go for retesting, while few of the participants declined to go for retesting due to financial constraint and the stress involved;

"Yes. I will. As long as the doctor deems it necessary for my well-being". (R1, 36 years).

"If retesting will make the doctor come to a conclusion, why not? It does not matter, if not, all I did will be waste of time".(R18, 47 years).

"I do not have money to do another retesting or anything. It is not easy on me; there are other issues I'm facing right now that requires money". (R21, 22 years).

"Honestly, I would not like to pass through this stress again since I do not have any symptom suggesting I have cervical cancer". (R25, 24 years).

DISCUSSION

Experiences of Women about CCS Post-Intervention Pre-screening experiences

First-time screeners

From the study, majority of the participants who were screened for the first time indicated that they experienced some level of anxiety and discomfort on how the procedure would be carried out because it was their first time, even though they had information about CCS prior to the screening. This shows that fear and anxiety over the CCS procedure can hinder its uptake. However, some participants revealed that they were not anxious during the screening process because of the knowledge they got from the educational intervention (SENIP). This reveals that supportive educational intervention has a role to play in reducing fear and anxiety for CCS, therefore increasing the extent of utilization of CCS. The finding is partly in line with the descriptive study on knowledge, barriers and uptake towards CCS among female health workers in Upper East Region of Ghana, which observed poor knowledge and low screening uptake among female nurses and midwives. The study evidently put forward barriers that resulted to the current situation, which included inadequate knowledge, high screening costs, discomfort and pain associated with screening, and the gender of the screener [11].

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Waiting time for screening

The result of the study revealed that some of the participants encountered waste of time trying to do the screening due to hospital protocols, attitude of the health workers, and unavailability of screening materials. This means that time-wasting in the hospitals from any of the aforementioned factors can discourage women from adequate utilization of CCS. Hence, there should be establishment of more screening centers, especially in the rural areas to encourage utilization of CSS services. Also, the existing centers should be upgraded with adequate structures, screening materials and personnel. The findings of the study is in consonance with that conducted on barriers and facilitators to cervical cancer screening among under-screened women in Cuenca, Ecuador; a qualitative and phenomenological study, in which the women identified barriers mainly at organizational level, such as long waiting times, lack of access to health centers, and inadequate patient-physician communication [20]. In conclusion, the women considered access to health services the main barrier to screening, while the health professionals identified a lack of investment in screening programs and cultural patterns at the community level as major obstacles.

Insufficiency of screening materials

Most of the participants in this study responded that they spent extra non-budgeted money for the screening due to lack or insufficiency of screening materials, which made them to travel to and fro again in order to do the test. This shows that beyond educational intervention, allocation of adequate resources is required for provision of enough screening materials at all times, as a way of eliminating barriers to uptake of CCS. The finding is similar to the study on factors related to CCS among Asian women. The investigation revealed several factors hindering the utilization of CCS in Asian women including socio-demographic factors, awareness, attitudes and beliefs, perceived risk, psychological factors, self-efficacy, previous experiences, time, household, culture, fatalism, social support, access, cost, safety, insurance and health system-related factors such as insufficiency or lack of screening materials. The authors concluded that several barriers hinder the efficacy of a screening program and they suggested that its success requires the use of educational interventions, professional and inter-professional cooperation, allocation of sufficient resources, and policymakers focusing on the elimination of barriers [18].

Intra-screening experience

Indifferent to male doctors conducting CCS

The study revealed that majority of the screeners were male doctors and majority of the participants were screened by these male doctors. But that notwithstanding, majority of the participants reported that the gender of the screeners did not matter to them. They further revealed that most of the male doctors were very caring and comported themselves well, making the participants relaxed. This shows that attitude of health professionals can positively affect the level of participation of women in CCS. It also shows the importance of health education, such as SENIP, in positively affecting women's attitude as regards indifference to male doctors

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conducting CCS. The finding is in contrast with the descriptive study on knowledge, barriers and uptake towards CCS among female health workers in Upper East Region of Ghana [11]. The study observed poor knowledge and low screening uptake among female nurses and midwives. The study evidently put forward barriers that resulted to the current situation, which included inadequate knowledge, high screening costs, discomfort and pain associated with screening, and the gender of the screener. The findings of the study is also in contrast with that conducted on barriers and facilitators to cervical cancer screening among under-screened women in Cuenca, Ecuador; a qualitative and phenomenological study [20]. The women identified barriers mainly at organizational level, such as long waiting times, lack of access to health centers, and inadequate patient-physician communication. In conclusion, the women considered access to health services the main barrier to screening, while the health professionals identified a lack of investment in screening programs and cultural patterns at the community level as major obstacles. The contrast between this study and those discussed above [11,20] could be because the women in this study were given health education in form of SENIP before going for CCS, so they were not interested in the screeners, but their well-being.

Physical discomfort associated with screening

Some participants experienced fear and anxiety during the screening with associated symptoms such as excessive sweating, palpitations and frequent urination. Few participants experienced lower abdominal and vaginal pain on insertion of the speculum. These experiences show that the psychological and physical effects of the screening should not be neglected. Hence, there should be pre-counseling or health education before the screening, and monitoring of vital signs for those who experience fear, anxiety and other symptoms. The finding is in consonance with the descriptive study on knowledge, barriers and uptake towards CCS among female health workers in Upper East Region of Ghana [11]. The study observed poor knowledge and low screening uptake among female nurses and midwives. The study evidently put forward barriers that resulted to the current situation, which included inadequate knowledge, high screening costs, discomfort and pain associated with screening, and the gender of the screener.

Post-screening experience

Expectations of screening outcome

Majority of the participants were expecting the outcome of the results to be negative because they were not having symptoms suggestive of cervical cancer, while some of the participants were afraid of the outcome because they had symptoms suggestive of CC. Being hopeful for a negative result is a positive attitude that can encourage routine screening uptake in women. However, the findings or experiences of these participants are partly in line with the findings of the study on understanding patients' factors to increase uptake of CCS, where the authors summarized the individual-level psychosocial factors, such as fear of outcome of result, as causes of reduced uptake of the screening process [25].

Waiting time for the screening result

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Findings from the study revealed that the participants expected to get their results in time or on the appointed day as scheduled, but were disappointed when the results were delayed. This made the participants worried. This shows that prolonged waiting time for screening result can subsequently affect women's attitude and level of utilization of CCS. The findings of the study is in consonance with that on barriers and facilitators to CCS among under-screened women in Cuenca, Ecuador; a qualitative and phenomenological study [20]. The women identified barriers mainly at organizational level, such as long waiting times, lack of access to health centers, and inadequate patient-physician communication. In conclusion, the women considered access to health services the main barrier to screening, while the health professionals identified a lack of investment in screening programs and cultural patterns at the community level as major obstacles.

Bleeding after screening

The findings of the study revealed that some of the participants had mild vaginal bleeding after the procedure which subsided not long. Their vital signs were monitored; they were counseled by the midwives, who also made sure they were stable before going home. This shows the importance of counseling the participants before the screening, because bleeding after the procedure is one of the factors that can discourage women's participation in CCS as supported by the descriptive study on knowledge, barriers and uptake towards CCS among female health workers in Upper East Region of Ghana. The study observed poor knowledge and low screening uptake among female nurses and midwives. The study evidently put forward barriers that resulted to the current situation, which included inadequate knowledge, high screening costs, discomfort and pain associated with screening, and the gender of the screener [11].

Intention to undergo retesting

This is a follow-up test that is usually done to determine if a person's condition has improved or as a confirmation of a result. Participants or clients with initial negative testing who need retesting may not feel comfortable going for retesting due to fear that the results might change. Findings from this study revealed that majority of the participants agreed to go for retesting, while few of the participants declined to go for retesting due to financial constraint and the stress involved in the screening process. This portrays the need for continuous health education and proper counseling before and after the screening.

IMPLICATION OF THE FINDINGS

The main aim of SENIP was to improve women's health and well-being, and it has been proved to be very effective in cervical cancer prevention as seen in this present study, and should be encouraged. The results of this study will be useful for other researchers working around women experiences during CCS. In addition, it will be useful in formulating policies to help ease anxieties and challenges faced prior to and during screening, in order to increase CCS uptake.

CONCLUSION

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There are some experiences that may either motivate or discourage women from subsequent screening, such as delay in attending to clients, lack of screening materials, physical discomforts during and after the screening, and attitude of the health professionals. Being aware of such experiences could help the nurses address them in order to increase the interest of the women in CCS. This will also help other women to know what to expect during and after the screening to help reduce their anxieties prior to screening. The researchers further recommended that new strategies and technologies, such as self-administered human papilloma virus (HPV) testing and community participation should be innovated and implemented to increase access to CCS. Also, the Ministry of Health should incorporate CCS as a routine test for women in any healthcare setting, and healthcare workers should make screening recommendations to women at all levels.

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Authors contributions

HO conceived and designed the study. HO, EAN and MO collected the data, cleansed and transcribed the data. HO and MO provided the statistical support and back to back translation. HO and EAN wrote the initial draft of the manuscript. EAN and MO critiqued the initial draft and modified it. HO, reviewed and revised the main manuscript. All others reviewed the manuscript.

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Data availability

Data are available for request but will soon be deposited in public domain.

Declarations

Ethical approval

Approval for this study was granted by the Department of nursing science Ebonyi State University, and Ikwo Local Government Area Ethical Committee.

Consent to participate

All the participants in this study were given an informed consent to participate in the study following description of the aim and design of the study by the researchers.

Consent for the publication

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Competing interests

The authors declare no competing interests.

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References

- 1. Agboeze, J., Ezeani, N.N., Nwali, M., Ukaegbu, C. and Mu'awiyyiah-Babale, S. (2022). Cervical Cancer Screening Knowledge, Uptake and Barriers among Female Undergraduates in a Nigerian University. Nigerian Medical Journal, 63(3), 220-225. Retrieved from https://nigerianmedjournal.org/index. Php/nmj/article/view/103.
- 2. Amado, G., Weldegebreal, F., Birhanu, S. and Dessie, Y. (2022). Cervical cancer screening practices and its associated factors among females of reproductive age in Durame town, Southern Ethiopia. PloS One. 17(12): e0279870. Doi: 10.1371/journal. Pone.0279870. PMID 36584208; PMCID: PMC9803181.
- 3. Anene-Okeke, C., Aluh, D. and Okorie, U. (2019). Knowledge, Attitudes and Practice of Cervical Cancer Prevention among Student Health Professionals in Nigeria. Asian Pacific Journal of Cancer Care, 4(4), 125-130. https://doi.org/10.31557/apjcc.2019.4.4.125-130.
- 4. Anoruo, O., Bristow, C., Mody, N. and Klausner, J.D.(2022). Estimated prevalence of human papillomavirus among Nigerian women: a systematic review and meta-analysis. Afr J Reprod Health; 26(6):89-96. Article CAS PubMed Google Scholar.
- 5. Aweke, Y.H., Ayanto, S.Y. and Ersado, T.L. (2017). Knowledge attitude and practice for cervical cancer prevention and control among women of child bearing age in Hossana Town, Hadiya zone, Southern Ethiopia: Community based across- sectional study. PloS One 12: e0181415. Doi: 10.1371/journal.pone. 0181415. [PMC free article] [PubMed] [CrossRef] [Google Scholar].
- 6. Centers for Disease Control and Prevention (2024). (U.S.). Screening for Cervical Cancer (https://www.cdc.gov/cervical-cancer/screening/). Last updated 10/2023.
- 7. Cervical cancer screening guideline" (2023). https://www.who.int/health-topics/cervical cancer. View at: Google Sccholar.

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- 8. Eric, L., Ruth, S., Dorice, V., Qinqin, C., Binbin, X., Maureen, A., Alexandra, A.O., Ophi ra, G. and Winnie, K.W.(2023).Roles and activities of nurses in cancer prevention and early detection in low- and middle-income countries: A scoping review. Received 17 March 2023, Accepted 8 May 2023, Available online 12 May 2023, Version of Record 27 June 2023.
- 9. Eshete, M., Atta,M. and Yeshita, H. (2020). Cervical Cancer Screening Acceptance among Women in Dabat District, Northwest Ethiopia, 2017: An institution- Based Cross-Sectional Study. *Obstetrics and Gynecology International*: 1-7.
- 10. Ferlay, J.(2021). Global cancer observatory:cancer today. Lyon, France: international agency for research on cancer, 3(20): p.2019. Google Scholar.
- 11. Johnny, A, N. and Edward, A. (2023). Knowledge, barriers and uptake towards Cervical Cancer screening among female health workers in Ghana: A perspective of the Health Belief Model, International Journal of Africa Nursing Sciences, Volume 19,100587, ISSN 2214-1391, https://doi.org/10.1016/j.ijans.2023.100587.
- 12. Lei, J.A, Ploner, K. and Miriam, E. (2020). HPV vaccination and the risk of invasive cervical cancer. *N Engl J Med*. 383 (14) (Oct. 2020), pp. 1340-1348, 10.1056/NEJMoa1917338
- 13. Mafiana, J.J., DHITAL, s., Halabia, M. and Wang, X. (2022) Barriers to uptake of cervical cancer screening among women in Nigeria: a systematic review. *Afr Health Sci*. 22(2):295-309.
- 14. Maitanmi, J. O., Fabiyi, T. E., Eniola, O., Sansi, T. O., Blessing, J. O., Maitanmi, B., Ojewale, M. O., Dairo, A. A., Adebiyi, D. A. and Akingbade, O. (2023). Knowledge and acceptability of cervical cancer screening among female undergraduates in Babcock University Ilishan-Remo, Ogun State, Nigeria. *Ecancermedicalscience*, 17, 1502. https://doi.org/10.3332/ecancer.2023.1502. PMID:36816789; PMID: PMC9937068.
- 15. Neha, M., Neha, T., Rajashree, S., Akanksha, P., Bhavika, C., Aanchal, A. and Awasthi, R.J. (2020). Knowledge, Attitude & Practice towards Cervical Cancer Screening among Women Globally A Systematic Review. Journal of Women's Health and Development 3: 194-210.
- 16. Parikh, P. M., Mullapally, S. K. and Hingmire, S. (2023). Cervical cancer in SAARC countries, *South Asian Journal of Cancer*, 12(l), 1-8 View at: Published Site lGoogle Scholar.
- 17. Sachan, P.L., Singh, M. and Patel, M.L.R.(2018). Astudy on Cervical Cancer Screening. Using Pap Smear Test and Clinical Correlation. *Asia-Pacific J. Oncol. Nurs*.5:337-341. Doi:10.4103/apjon-15-18.[PMC free article] [PubMed] [CrossRef] [Google Scholar].
- 18. Salehiniya, H., Momenimovahed, Z., Allahqoli, L., Momenimovahed, S. and Alkatout, I. (2021). Factors related to cervical cancer screening among Asian women. Social Determinants of Health Research Center, Birjand University of Medical Sciences, Birjand, Iran. ibrahim.alkatout@uksh.de. Eur Rev Med Pharmacol Sci. 2021; 25 (19): 6109-6122
 - DOI: 10.26355/eurrev 202110 26889.
- 19. Seyoum, A., Assefa, N., Gure, T., Seyoum, B., Mulu, A. and Mihret, A. (2022). Prevalence and genotype distribution of high-risk human papillomavirus Infection among Sub-Saharan African women: a systematic review and Meta-analysis. Front Public

Experiences of Women about Cervical Cancer Screening after Educational Intervention in Ikwo Local Government Area, Ebonyi State, Nigeria

Health.

- 10:890880. https://doi.org/10.3389/fpubh.2022.890880/full. https://doi.org/10.3389/fpubh.2022.890880/full. https://www.frontiersin.org/a h
- 20. Vega, C. B., Neira, V. A., Ortíz Segarra, J., Andrade, A., Guerra, G., Ortiz, S., Flores, A., Mora, L., Verhoeven, V., Gama, A., Dias, S., Verberckmoes, B., Vermandere, H., Michelsen, K.and Degomme, O. (2022). Barriers and facilitators to cervical cancer screening among under-screened women in Cuenca, Ecuador: the perspectives of women and health professionals. *BMC Public Health*, 22(1), 2144. https://doi.org/10.1186/s12889-022-14601-y.
- 21. Tsu V.D, D.S. LaMontagne, P. Atuhebwe, P.N. Bloem, C. N (2021). National Implementation of HPV vaccination programs in low-resource countries: lessons, challenges, and future prospects. Prev Med, 144 (Mar. 2021),p. 106335, 10.1016/j.ypmed.2020.106335View PDFView articleView in ScopusGoogle Scholar.
- 22. Victor, A.G.A., Sanmiguel, R.O., Ramos, A.R. and Navarro, P.(2023). News of the pedagogical models in physical education- Aquick review. *Int J Environ Res Public Health*;20(3):2586.
- 23. World Health Organization (2023). Human papillomavirus vaccines: WHO position Paper (2022 update)", *Weekly Epidemiological Record*. 97 (50): 645-672. Hdl:10665/365351.
- 24. World Health Organization,(2024). *International Agency for Research on Cancer. Cancer Today* [Internet]. Lyon: Global Cancer Observatory (GLOBOCAN);[cited 2019 Feb 02]. [Google Scholar].
- 25. Young, B.and Robb, K. A. (2021). Understanding patient factors to increase uptake of cancer screening: a review. *Future oncology (London, England)*, 17(28), 3757–3775. https://doi.org/10.2217/fon-2020-1078.
- 26. Ikwo Local Government Office, (2025).