A qualitative research on perception and experience of students regarding practice of cervical cancer screening: a case study of Nigerian Students

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ABSTRACT

Cervical cancer screening allows for the early diagnosis of aberrant cervical cells, such as precancerous cervical lesions, as well as cervical malignancies in the initial stages. Cervical screening has been found to minimize the mobility and mortality of cervical cancer. Cervical screening is not widely practiced in underdeveloped nations for a variety of reasons and barriers. The study aims to explore the perception and experience of the Nigerian students in Sunderland regarding the practice of cervical cancer screening. A qualitative research approach was used in this study using purposive sampling to select the interviewers who are Nigerians. This study was conducted with eight female postgraduate Nigeria students at the University of Sunderland, United Kingdom. Semi-structure in-depth interview was carried out under the qualitative study. The interview was conducted face to face using audio recording, transcribed, and coded for analysis. Finding from this study showed elevated level of awareness of cervical cancer screening as evidence by knowledge displayed by participants and important of the cervical screening to the participants. The level of awareness differs based on their opinion from the experience. This study also highlighted the socio-cultural restrains, structural and economical constrains that served as barriers to the practice of cervical cancer screening in Nigeria. This is revealed by the participant's feedback to the interview question on the barriers and facilitators to the practice of cervical cancer screening. This implies that these barriers limit the practice of cervical cancer screening. Cervical cancer is a global issue that claims the lives of women. Cervical cancer screening is a good innovation which helps to reduce the incidence of cervical cancer. Recommendation was given to public health, nurses, federal government, and organizations on how to increase awareness and eliminate barriers to the practice of cervical cancer screening.

1. INTRODUCTION

Cervical cancer has a significant impact on individual women, families, economies, and underdeveloped health systems around the world (Darj et al, 2019). Invasive cervical cancer (ICC) is the fourth most frequent neoplasm in women worldwide and a primary cause of mortality. More than 570,000 new cases of cancer in women were diagnosed in 2018, accounting for 6.6% of all malignancies in women globally (Adedimeji et al, 2021). In United Kingdom, the NHS Cervical Screening Programme invites women aged 25 to 64 to have cervical screening on a regular basis (Bennett et al, 2018). In industrialized nations with effective screening programs, early identification and treatment through screening can prevent up to 80% of cervical cancers (Taneja et al, 2021).

East Africa has the highest cervical cancer incidence rate (42.7 per 100.000 women) and mortality rate (27.6 per 100.000 women) in the world (Linde, 2018). With 32 occurrences per 100,000 women, South Africa has the highest age-standardized incidence of cervical cancer in the world, whereas Paraguay (a middle-income country) has the highest incidence (34.2 per 100,000 women, and a mortality rate of 15.7 per 100,000 women (Hull et al, 2020). In addition, only 1% of women in four West Africa countries had ever undergone a cervical cancer screening (Yimer et al. 2021). In Nigeria, cervical cancer is the second most common female cancer, with a 34.5 per 100 000 age-standardized incidence rate and a 0.6 incidence/mortality ratio (Modibbo et al, 2015).

Cancer claimed the lives of 70 327 Nigerian women in 2018, with cervical cancer accounting for 14.8% of these deaths (Anyasi and Foss, 2020). Cervical cancer is the most common malignancy among Nigerian women, with 24.8 percent of them carrying the cervical Human Papilloma Virus (Eze and Obiebi, 2019). Most Nigerian women are detected at advanced illness stages because of lack of information and low access to health care, resulting in limited treatment options and high fatality rates (Ishola and Omole, 2016). Given Nigeria's prevalent poverty rate (48.4%) (World Bank, 2014), paying out-of-pocket for screening services, which typically cost between 2,500 and 10,000 Naira (depending on the site of screening), is a significant financial commitment (Ilevbare, 2020). Access to effective, widespread screening is limited in developing nations, resulting in an increase in Cervical Cancer-related mortality (Taneja et al, 2021; H. van Oers, L. Schlebusch, 2022).

Precancerous lesions are more common in women between the ages of 30 and 40 (Aldohaian et al, 2019). Cervical cancer remains a major public health issue that primarily affects middle-aged women, especially in countries with little resources. In the absence of other causes of mortality, around 84 percent of all cervical cancers and 88 percent of all cervical cancer fatalities occurred in low-resource nations, where 18% of women were diagnosed with the disease and 13% died from it before the age of 75. (Arbyn et al, 2018). In Nigeria, there is a poor practice of cervical screening among the tertiary female student (Ogwunga, 2021).

Cervical cancer screening allows for the early diagnosis of aberrant cervical cells, such as precancerous cervical lesions, as well as cervical malignancies in the initial stages. Cervical screening has been found to minimize the disease's incidence and death (Getachew et al, 2019). Cervical cancer screening and the establishment of preventive behavior might be influenced by

a lack of awareness and a negative attitude toward the disease and risk factors (Agboeze et al, 2018). Despite the availability of cervical screening facilities, an evaluation of community-based cervical screening in two rural local government areas in Ogun state, Nigeria, found that more than 95 percent of sexually active women had never had cervical screening (Abiodun and Olu-Abiodun, 2018). Even though a single cervical cancer screening might save the lives of over 6000 Nigerian women each year, the practice is low.

In 2003, it was also determined that the screening frequency should be consistent throughout the programme, with women aged 25 to 49 invited every three years and women aged 50 to 64 invited every five years (Albrow et al, 2012). In the study conducted by Emmanuel (2020) on cervical cancer screening among female students in tertiary institutions in Calabar, the findings revealed that only a few students practiced cervical cancer screening, with only 25 (14.6 percent) of the 171 students used in the study practicing cervical cancer screening.

Also, a similar study showed that only 9.4 percent of the respondents had ever screened for cervical screening despite having good knowledge of cervical cancer. This indicated poor practice of the screening and there is need to highlight and offer better education on the importance of cervical screening so that women will improve in the practice of cervical screening (Agboola and Bello, 2021).

According to Tesfaye et al, (2019), few of the participants, 19.5 percent identified HPV as the main causes of cervical cancer. Nine studies in Nigeria found cervical cancer screening uptake of less than 5.3 percent, whereas four researches found screening uptake of more than 5.3 percent (Table 1), compared to 75 percent in industrialized countries. In developing nation such as Nigeria, according to the practice of cervical screening is very low in Nigerian, whereas this major issue needs to investigate to prevent cervical cancer among women (Nwolbodo and Ba-Break, 2015).

Table 1. Cervical screening rate in Nigeria

	Study population	**Study area in Nigeria**	**Screening rate %**
1	Women who attend antenatal clinic	Ibadan (West)	0
2	Igbo women in a rural population	South-East	0.6
3	Female medical practitioner	Enugu South-East	1.8+-1.2
4	Women who attended the gynecological out-patient clinic	Sokoto (North)	1.29
5	Rural women	Osun (West)	2.4
6	Rural women	Ibadan (West)	3.9
7	Rural and urban women	Nigeria	4.
8	Women in urban neighborhood	Lagos (West)	5.1

9	Female undergraduate students	Nigeria University	5.2
10	Women in Owerri	South-East	7.1
11	Igbo Women	Abakaliki (South-East)	10.1
12	Federal civil servants	Jos (North)	10.2
13	Female Nurses	College Hospital Ibadan	32.6

This table shows that cervical cancer screening rates in Nigerian women are poor, according to rate of the screening. In developed countries, Pap smear screening, which detects cytological abnormalities in the cervical transition zone, has helped to lower the incidence and mortality rates of cervical cancer by 70% within three years of programme implementation (Aldohaian et al, 2019). Screening is done to discover the presence of high-grade pre-cancers that can be treated before they proceed to cancer, as well as to detect invasive cancer early (Kim et al, 2018).

The extended time between HPV infection and the onset of cervical cancer, cervical cancer screening has proven to be successful in reducing both cervical cancer incidence and mortality. The major purpose of cervical cancer screening is to discover curable abnormalities, pre-cancers, and adenocarcinoma in situ before they advance to invasive cancer, thereby lowering cervical cancer incidence, mortality, and treatment-related morbidity (Fontham et al, 2020; Ebube, et al., 2023; Abolaji, et al., 2021).

Cervical screening is not widely practiced in underdeveloped nations for a variety of reasons and barriers, which have been identified in numerous researches (Lim and Ojo, 2017). Only approximately 5% of women in resource-poor countries have been screened for cervical cancer, compared to 40–50% in developed nations, according to the World Health Organization (Getachew et al, 2019). Unavailability of screening programmes, a lack of human resources, material resources, and financial resources, a lack of healthcare infrastructure, and competing health objectives are some of the structural impediments (Anaman-Torgbor et al, 2017).

According to a study conducted by Eze et al. (2012) at the Mater Misericordiae Hospital in Afikpo, Southeast Nigeria, respondents cited lack of awareness, non-availability of screening centers locally, cost, and time as the primary reasons for not being screened. Fear of a negative screening result, lack of awareness of services, embarrassment and invasion of privacy, lack of spousal support, societal stigmatization, cost of accessing services, and health service factors such as proximity to facility, facility navigation, waiting time, and hepatitis C were reported among the women in the study conducted by Lim and Ojo (2017) on barriers to utilization of cervical cancer screening in Sub Sahara Africa. Figure 1 shows a chart summary of the barriers of practice of cervical screening in Nigeria.

Cervical cancer is a disease of inequality. Cervical cancer can be prevented, and there is a long precancerous stage during which screening can be done and any premalignant lesions identified can be treated to prevent the illness from progressing to the invasive stage (Uchendu et al, 2021). The recent World Health Organization's Call to Action to eliminate cervical cancer is a unique opportunity to galvanize change and remove barriers to prevention and care (Alfaro et al, 2021).

The use of Information, Education and Communication (IEC) as a method for CC prevention and quick treatment as an integrated service has the potential to raise awareness and improve knowledge (Chukwuka et al, 2021). The call to action is a chance to eliminate cervical cancer; it is our generation's responsibility to ensure that no woman dies from this avoidable disease (Alfaro et al., 2021). In terms of effective intervention techniques, community-based cancer awareness education that is sensitive to religious and cultural concerns was the most preferred strategy for enhancing use of screening services (Thomas et al, 2013). This study, aiming at bridging the existing gaps in the literature on the research topic, explores the perception and experience of Nigeria students regarding the practice of cervical screening in the United Kingdom.
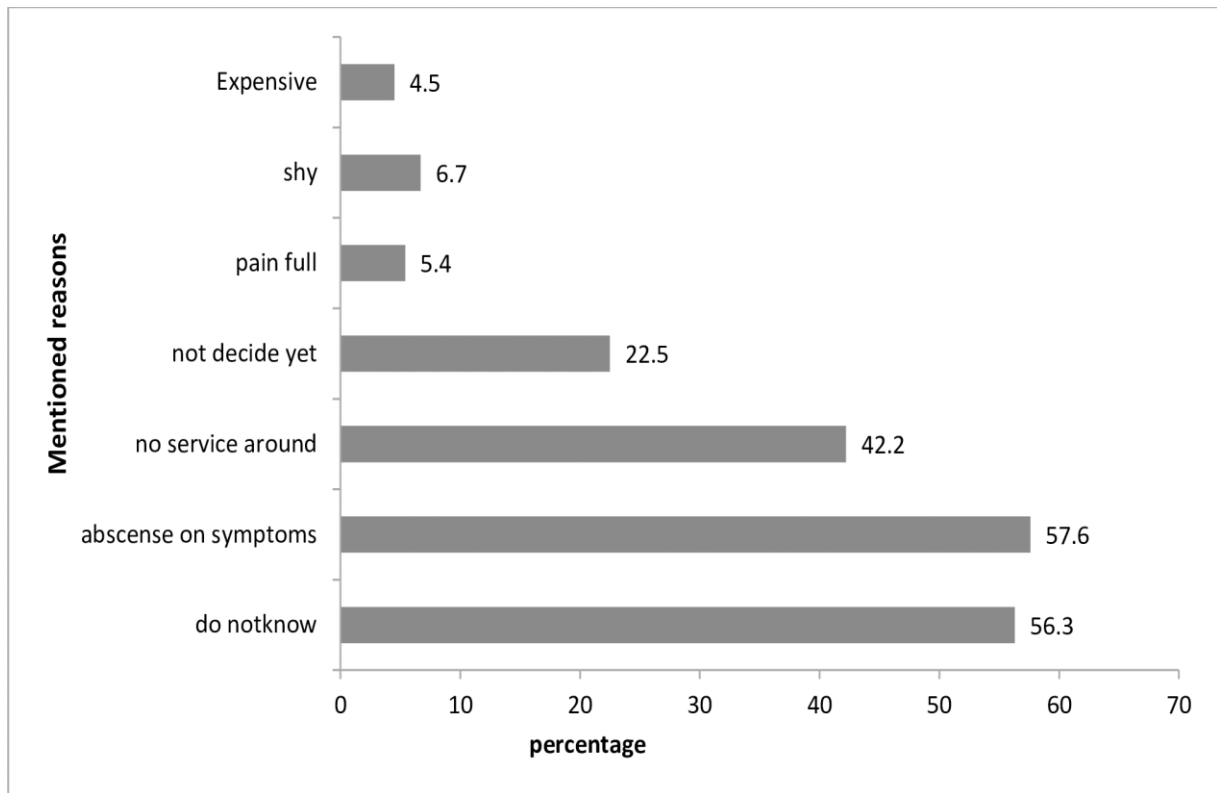

Figure 1. A chart summary of the barriers of practice of cervical screening in Nigeria

2. RELATED WORK

Rasul et al. (2015) conducted a study using purposive sampling on perception of cervical cancer screening among 19 Kurdish women between the ages of 25 to 52 years. Three semi-structure in-depth interviews were adopted to collect information from the participants. Their study underscores four main themes such as conflict, belief, awareness, and socio-cultural factors that influence practice of cervical cancer screening. A study by Ogbonna (2017), conducted a study to examine knowledge, attitude, perception and experience of cervical cancer, its risk factor and screening among 186 female students between the ages of 18 to 35 of Sub-Saharan African female students in United Kingdom University.

Convenient sampling was adopted, and a semi-structured questionnaire was used to collect data for the study. The study revealed that 38.2% were aware of the cervical screening but only few 10.8% have knowledge of the cervical cancer screening.

Owoeye and Ibraham (2013), assessed knowledge, level of perception and attitude of female staff and female students at Niger Delta University, Nigeria toward cervical cancer screening among 400 participants. Descriptive cross-sectional was adopted for the study. Questionnaires were analyzed, out of which 100 were staff and 260 were students. The age range of the respondents used for the study is 16-65 and every student and staff below 16 and above 65 was excluded from the study. Ogwunga et al (2021) conducted a study on knowledge and attitude of 400 female students in four tertiary institutions in Nigeria. Their study is to determine the knowledge of cervical cancer and its screening methods in female student of a tertiary educational institution. Their study showed that out of 400 female students that were interviewed, 87.9 percent have heard of cervical cancer while 66.6 percent have heard of cervical screening. Majority of the respondents (93.5%) agreed that the risk factor of cervical cancer is having multiple sexual partners.

A study by Allagoa et al. (2020), conducted a cross-sectional descriptive study among 424 female students at the Federal University of 0tukoe in Nigeria. Their study showed that 57 percent of the participants were aware of cervical cancer. The 26.9% of respondents knew what a pap smear was. Another study by Gimba et al. (2014) evaluated a study among 120 students at University of Jos in Nigeria to assess the knowledge and attitude of the student toward practice of cervical cancer screening using a descriptive survey. Their study found out that only 33.04 percent have ever heard of Pap smear, among which only about 55.10 percent related it to cervical cancer. Only 7.89 percent knew the recommended age for the screening and only 10.53 percent were aware of the frequency. About 53.04 percent of the students felt that the test is relevant to them. Also, 50.50 percent intend to do the test. Omorogbe and Ehizemwogie (2019) conducted a cross-sectional descriptive survey study among 200 female students in University of Benin Nigeria from age 16 to 30 years at 100 to 500 levels. This study reported that 86.7 percent of respondents had knowledge of cervical cancer and only 18 percent of the respondents have had cervical screening.

This study showed that the students have good awareness of cervical screening, but the uptake of cervical screening is poor. This is against what was posited in the work of Albrow et al, (2012), where they posited that cervical screening should start at 25 years of age. Moreover the 100 and 200 level students should have been excluded for this study because the average age would have been 16 years old at this level.

Also, the study by Emmanuel (2020), using 93 female nursing students in school of nursing, University of Calabar Teaching Hospital, Calabar Nigeria, reported that 93.5 percent of the students have good knowledge of cervical screening but only a few of the nursing student's 29.04 percent have inadequate cervical screening practice. Annan et al. (2019) conducted cross-sectional survey design with a purposive sample among 200 female students in Ghana.

Findings showed that cervical cancer knowledge, perceived susceptibility, perceived seriousness, and perceived benefits were significant and positively correlated with increased screening behaviors. A cross-sectional study by Ahmed et al. (2020) conducted among 141 female students in USA reported that 69 percent of the students have never received Pap test. Also, 82 percent of the students mentioned procrastination, lack of interest and fear as the reason for never practicing screening. Gorleku et al. (2019) conducted study among 150 tertiary

students in Ghana to assess the knowledge, risk factors and perceived preventive methods about cervical cancer. The study found that 59.3 percent of students were not aware that, early sexual intercourse is a risk factor, and 78 percent, 64 percent and 90.7 percent of the respondents did not know that smoking cigarette, use of oral contraceptives and stress, respectively are risks of cervical cancer. A cross-sectional analytical study was conducted by Eze et al. (2018) among 316 employees of a tertiary health facility using stratified random sampling and proportionate allocation. The study revealed that only 92 (29%) of respondents had a strong understanding of cervical screening; having a better understanding of cervical screening was linked to working in a clinical department, having worked for less than two years, and being female. A similar cross-sectional study by Ahmed et al. (2013) on knowledge, attitude and practice of cervical screening was conducted in Nigeria involving 260 market women in Zaria Nigeria, found that 43.5 percent of the respondent have fair knowledge of cervical cancer and screening, 80.4 percent of them good attitude of the cervical screening but only 15.4 percent of the respondents have ever practice cervical screening. It was evident that the practice of cervical cancer screening is low from this survey, and this has led to diagnosis of cervical cancer at the late stage, when management is not able to sufficiently cure this deadly disease at this stage (Ogwunga et al, 2021).

These are major barriers that limit the practice of cervical cancer screening in developing countries. Also, religion and cultural belief are part of these barriers (Anaman-Torgbor et al, 2017). Kabiri and komuhangi (2021) conducted a study to determining the facilitators, barriers and background factors associated to cervical cancer screening among female undergraduate students in Makerere University. A self-administered semi structured questionnaire was used using convenient sampling among 422 undergraduate students between 21 to 25 years. Darj et al. (2019) conducted a study on barriers and facilitators of cervical cancer screening, stated that mistrust and gossip, poor experiences in past interactions with service providers, the tough topography of the nation, and financial constraints were all identified as socio-cultural barriers to their participation at clinics for cervical cancer screening.

3. MATERIALS AND METHODS

This study will adopt qualitative (purposive sampling) methods of research. The goal of qualitative research is to provide knowledge that may be used in the field of medicine (Hunt, 2009). The inquirer generates meaning from the data acquired in qualitative research, which is mostly inductive (Crotty, 1998). As a result, most of the questions are open-ended, allowing participants to express themselves clearly and accurately. Participants' experiences and views, as well as how they make meaning of their lives, are the subject of qualitative research. The qualitative method was chosen to provide an in-depth and detailed explanation of this research without attempting to assign frequencies (Chih-Pei & Chang, (2017).

3. 1. Research design

To answer the study question, a research design was used, and data collection might be primary or secondary. It is concerned with determining why and how a phenomenon occurs (Glasper and Rees, 2016). The descriptive and exploratory design was employed in this study. The data for this study was gathered using in-depth interviews. The process of research design can be broken down into four overlapping and cyclic steps, collectively known as flexible

research design. Preparation, interviewing, analysis, and reporting are the four steps in the process (Brinkmann, 2013). The study was conducted at the University of Sunderland in Tyne and Wear, England's north-east. A total of 20,000 undergraduate and postgraduate students attend campuses in the Northeast coast, London, and Hong Kong. Sunderland was chosen as the location for this study because it provided convenient access to Nigerian students.

In this study sample size of 6 to 10 will be considered with age group of 25 and above. The sample was gathered from Nigerian postgraduate students at the University of Sunderland who have had the experience of cervical screening for at least once. Advertising e-mails were sent to the gatekeepers, to inform the eligible participant that they would have an interesting participation in the study. The study comprised the first eight interested people who matched the inclusion criteria, signed the consent form after obtaining the participant information sheet. Due to the wealth of data that can be collected from these participants, this intentional and flexible recruitment technique is thought to be appropriate (Smith et al, 2023).

Eight participants were interviewed face to face capturing audio recordings. The preference for face-to-face platform captured all the nonverbal communication of the participants, increased accuracy of findings and eliminated geographical barriers. A separate audio record in English Language for about 10-20 minutes was undergone at Murray library by each of the recruited participants. The participants were current students at university of Sunderland who have met United Kingdom language requirement hence, translation will not be needed. Table 2 shows the recruitment details of the participants.

Table 2. Recruitment details of the participants

Participants	Age	Education	Profession	No CCS done	Location in Nigeria	Duration of stay in the UK
P1	42	MSC	Nursing	Two	City	<12 months
P2	38	MSC	Nursing	Two	City	< 12 months
P3	40	MSC	Business management	One	Rural	< 12 months
P4	45	MSC	Nursing	Two	Rural	< 12 months
P5	41	MSC	Public health	One	City	< 12 months
P6	50	MSC	Business management	One	City	< 12 months
P7	43	MSC	Public health	Two	City	< 12 months
P8	30	MSC	Nursing	One	Rural	< 12 months

3. 1. 1. Inclusion criteria

- Students (female postgraduate) of university of Sunderland University who are currently legal permanent resident of Federal Republic of Nigeria.

- Participants must be age 25 and above.
- Participants currently living in United Kingdom for less than a year
- Participants must have done cervical screening at least once

3. 1. 2. Exclusion criteria

- Participants who did not meet the inclusion criteria
- Students who did not volunteer to participate
- Students who have never done cervical screening before
- Participants who did not sign the consent form.

3. 2. Instrument

To supplement the digital audio recording, field notes were gathered, including important observations of body language, speech tone, hand gestures, and facial expressions. While collecting data, the researcher avoided being overbearing and was sympathetic to the participant's feelings. Semi-structured interviews were conducted face to face at pre-arranged times using Murray library at the convenience of the participants. The interview questions were both closed and open-ended, and they corresponded to the study questions. A topic guide with 6 questions, guiding questions, and follow-up questions were used to investigate the perception of the participants.

When necessary, probing inquiries and prompts were also employed. The researcher emphasized participant comfort with the questions asked at the start of each interview, and they were not obligated to answer if they were uncomfortable. To get people to settle in on time, they were welcome, and their safety was secured. Reflective listening was utilized to ensure that the correct viewpoints were captured, and empathy displayed to make the participants felt understood and care about.

4. RESULTS AND DISCUSSION

This section presents the key findings in a narrative form, with the use of charts for better understanding. The findings are grouped under themes and sub-themes identified through thematic analysis.

4. 1. Thematic analysis of findings

Interviews were conducted with eight participants, transcribed, and then analyzed using thematic analysis. Thematic analysis provides a way of looking for emphatic or repetitive words or phrases in the transcript and tries to link them together into themes that capture the key subject under investigation (Braun and Clarke, 2006).

The thematic process of analyzing data entails repetitive reading of the transcript searching for common concepts and coding them together to form a meaningful theme. Some important themes have been outlined and the key findings were reached. The recordings and transcripts from the interviews were repeatedly reviewed and analyzed in order to capture the crucial patterns of relevance to this research. Further to this, three major themes were identified with seven sub-themes and categories as shown in Table 3.

Table 3. Themes, sub-themes, and categories of qualitative data

THEMES	SUB-THEMES	CATEGORIES
Level of awareness	Knowledge of cervical screening	(i) Know you are prone to HPV. (ii) Understanding of the meaning of CCS.
	Importance of screen to general health	(i) Know your health status. (ii) Necessary to practice CCS.
Socio-cultural restrains	Religious beliefs.	(i) Against my faith to practice cervical screening. (ii) Discouraged by my belief.
	Cultural beliefs	(i) Belief that cervical screening is a taboo to practice it. (ii) Indiscriminate practice.
Structural /Economical restrains	No consent from spouse	(i) Spouse not in support of the screening limits the practice. (ii) Not allowed by the husband influence in the screening.
	Misconception	(i) Misinterpretation of the pain. (ii) Feel of shame of the screening. (iii) Discouragement. (iv) Fear of outcome of screening. (v) Stigmatization of promiscuity. (vi) Discomfort. (vii) Negative perception.
	Paying out of pocket	(i) Cost of doing the screening. (ii) Charges paid for screening.

4. 1. 1. Theme 1: Level of awareness

The first key theme identified in this research work is level of awareness of cervical cancer screening. The theme was formed from the common answer provided by the participants.

There were other sub-themes linked to this key theme such as: knowledge of cervical screening, importance to health and perception towards cervical screening. The level of awareness of cervical screening practice among the participants was remarkably high based on their knowledge. When asked the question on the "What do you think about cervical screening" The participants' responses showed an elevated level of knowledge of cervical cancer screening practice. This was based on their previous experiences from the screenings they have done in the past. There was an agreement in the response of the participants, which showed that they were not influenced negatively by their past experiences.

This is in concordance with the following studies (Owoeye and Ibraham, 2013; Omorogbe and Ehizemwogie, 2019). However, this is in contrast with the study conducted by Allagoa et al. (2020) in Nigeria which assess the knowledge and awareness of the university students. The result revealed low level of awareness of cervical screening, the test was low.

a) Knowledge of cervical screening

Participants' knowledge of cervical cancer screening tends to be encouraging that will enable them to continue in the practice of cervical screening. They are two categories.

So, it is a screen that is done to detect if there is ehm… ehm.. Human Papilooo.. papilooehm.. HPV cells in the woman body and ehm… I know that it helps to prevent cervical cancer and for early detection of the virus……………………………………………………….……...Participant 1

During cervical screening, I understand that emm………. we are trying to detect if there is presence of Human papiloma virus which causes ehm… you know……. the growth of the abnormal cells within the cervix………………. …………………….……………………Participants 2

For me it is a very good idea, it is an incredibly good innovation to bring in cervical screen to let people know they are prone to Human papiloma virus and what can be done to deal with the infection before it gets to end stage cancer…………………………………….……Participants 4

To the best of my knowledge, cervical screening is the test for human papiloma virus. From the research, the virus is an abnormal cell in the cervix. Emmm…. another way of describing it is a way of detecting cervical cancer…………………………………………………….…….Participant 8

Therefore, the knowledge of cervical cancer screening is a key factor that can increase the level of awareness of the participants.

b) Importance to health

Participants affirmed that practice of cervical cancer screening is important to their health because it is good for them, and it is necessary to maintain their health. This is because of contentment derived from past negative screenings.

Well, cervical screening is particularly important and crucial in the sense that it helps to detect ehm.. the early symptoms of cervical cancer ………and puts your mind at rest…. Participant 2

Cervical screening for me is a very good innovation and necessary for me to do it because a lot of people have died from cervical cancer back in the days without knowing that they even had cervical cancer, so when the innovation came and people decided to do screening for cervical cancer, it think this is personal, I personally was very delighted to hear about it……………………………………………………………………………………….Participants 4

Well, cervical cancer screening is very essential, at least it is good to know your status, like if there is anything and if there is something that can be done quickly about it, so it is okay to do screening regularly………………………………………………………………….......Participant 5

c) Summary of finding from theme one

Findings from theme one showed that there was a high level of awareness of cervical cancer screening among the participants as evidenced by the participant's knowledge of the screening. The participants' level of awareness differs based on individual opinions, but it revealed a positive outlook in terms of knowledge and the importance of screening to their health. Participant's knowledge and importance of the screening also suggest their perception of the cervical screening despite their previous experience of cervical screening. The level of knowledge and awareness they encountered during the practice of the screenings superseded any discomfort they must have encountered in time past.

4. 1. 2. Theme 2: Socio-cultural restrains

The second theme is socio-cultural restrain to the practice of cervical cancer screening. It highlights barriers to the practice of cervical screening and how it influences practice of cervical cancer screening among the participants. This aligns with the work of Anaman-Torgbor et al. (2017) on barriers and facilitators of cervical cancer screening which revealed that the reason for the limitation of cervical cancer screening practice as mentioned by the respondents are religion and cultural belief that hinder the practice of cervical cancer screening. The study also supports the work of Rasul et al. (2015) on perception of cervical screening which showed that participant spirituality (religion) influences the practice of cervical cancer screening.

However, these data highlight categories which captured the participants' barriers to the practice of cervical screening. These categories are grouped into two sub-themes namely: cultural beliefs and religious beliefs as discussed below.

a) Religion belief

Participants expressed their firm believe that their belief will not permit the practice of cervical screening and this is one of the factors that influences the practice of cervical screening. They outlined religion as one area which can influence the practice of cervical screening.

Some people believe in ehm……………. in some other things and they believe that those other things will not give them the permission to do the screening or one test on their body, so yea, religions play major roles in people obtaining the cervical cancer screening……Participants 4
And them some religious beliefs, some believe when you are okay, you do not need to do the test. Those are the things that form the barrier. ……………………………………..Participant 6
Religion could be a barrier because some people belief that their wives should not expose themselves to men humm….. let me be precise about this the Muslim men, even they do not even allow other women to see their wives that is why they cover themselves from head to toe. In that sense they will never allow their wives to practice the test at……………………….Participant 8

b) Cultural belief

Participants made known that individual belief is a major problem that serves as barrier to the practice of cervical cancer screening. The participants mention the practice as a taboo and indiscriminate practice to their culture.

You know, in the sense that some cultures do not allow practice of the screening ehm… they feel that why going to expose a female genital area indiscriminately and all that. It might be a taboo in their place…………………………………………………………………..…….Participant 2

*Cultural beliefs play major roles in people obtaining the cervical cancer screening, they see it as a taboo for them to do the test…………….……………………………………………….*Participants 4
Some people might be afraid it is male personnel that are going to attend to them, and they see it as taboo in some culture too……………………………………………………………..... Participant 6
*Some culture sees it as taboo to do the test………………………………………….….*Participant 8

c) Summary of finding from theme two

Findings from these themes revealed that there was socio-cultural restrain to the practice of cervical cancer screening among the participants obviously by their response to the barriers to the practice of cervical cancer screening. Participants' experience of the practice of cervical cancer screening showed that religion belief of the participant serves as a barrier to the practice of cervical screening. Their religion does not permit them to do such a practice. Another finding is the cultural belief that was mentioned by the participants. This was indicated by the participant's response to the question on barrier to the practice of cervical screening. This means that individual culture can limit their practice of the screening.

4. 1. 3. Theme 3: Structural and economical restrains

The third theme is structural and economical; it highlights its misconception and how it relates to perception and experience of cervical screening and its influences in the practice of cervical cancer screening in Nigeria. This shows agreement with the work of Anaman-Torgbor et al. (2017) that reviewed that the major reason why the participants are not practicing cervical screening earlier was pains they experienced during the test by insertion of Cusco Speculum. This is in synchrony with the work of Kabiri and komuhangi (2021), determining the facilitators, barriers and background factors associated to cervical cancer screening among female undergraduate students in Makerere University. It showed that fear of bad result serves as a barrier for the practice of cervical cancer screening among the participants. This agrees with the work of Annan et al. (2019) on perceived seriousness mediating the influence of cervical cancer screening. Another important finding from this work is charges and the amount it costs the participant to uptake the cervical cancer screening. They mentioned paying out-of-pocket was a barrier that limits them in practice of the screening. This is in support with the work of Anaman-Torgbor et al. (2017) paying out of pocket to do the test was really challenging for some women that are leaving from hand to mouth to continue the practice of cervical cancer screening. These are major barriers that limit the practice of cervical cancer screening in developing countries like Nigeria. This is in accordance with the work of Eze et.al. (2018); cervical cancer awareness and cervical screening uptake in Nigeria, which revealed that cost and the time it took to acquire results were all cited as reasons for not going for the screening. However, these data highlight codes which capture the participants about practice of cervical screening. These codes are grouped into four sub-themes namely: Spouse not in support, paying out of pocket and misconception as discussed below.

a) Misconception

Participants' experience of pain during the practice of cervical cancer screening showed fear toward cervical cancer screening. All the participants repeatedly emphasized their misconception of the practice of cervical cancer screening based on their experience on the practice of the screening.

Ahh, it was an uncomfortable procedure, even before the procedure the nurse gave me detailed of what I am supposed to experience………………………………………………………… Participant 1

It is ehm.. I think, I thought, about the pain that I might experience, you know, for them inserting those forceps or the things they use to view the cervix……………………………….. Participant 2

I said I was not scared of going for the screening because I know it is something that will benefit me in a long run……………………………………………………………………………Participant 3

I don't want to experience that kind of pain, so I was a bit skeptical going for the screening, but I finally changed my mind and went for it………………………… …………………..Participant 5

Well, I, for me, When I did it, it is uncomfortable because it is painful it is a bit painful………………………………………………………………………………………Participant 7

Humm…. It was painful when the instrument that was used to view the cervix was inserted through my vaginal…………………………………………………………………….....Participant 8

The participant highlights negative perception as one of the misconceptions that hinders the practice of cervical screening.

Except somebody who is pregnant, you are not expected to go through cervical screening, if there is a bleeding like somebody who is having issue with ehm.. Hemorrhage, he is not advised to go for cervical screening because using the cusco and other instruments, the instrumentation of that area might trigger ehm……. I mean bleeding sometime a little spot after doing the screening you might have a little spot. Depending on what they use for you……………………………………………………………………………………..Participants 1

Yea, the possible barrier is when, when one is on her menstrual cycle, that's monthly period, it is not advisable you go for cervical screening test because it will hinder viewing the cervix……………………………………………………………………………………….….Participants 3

The participants demonstrated their fear of outcome of the screening and their experience during the practice of cervical cancer screening; they mentioned their feeling about the screening.

Honesty, when I went for the screen, I felt uncomfortable in the sense that ….......I thought, maybe, only abnormal growth, you know, coming up in that area, that fear of uncertainty, the test is not really a comfortable one, carrying out the screening…………………....Participant 2

Well, I was scared, I did not want to go for it but at die-minute, I just changed my mind, I was scared because, I've heard people say it was painful……………………………....Participant 5

Before doing it, I was afraid. But after, having done it, I became relaxed with the negative result………………………………………………………………………………….... Participant 6

I was not comfortable while I was undergoing the screening, I was anxious about what was going on. I was anxious because it is about cancer………………………………..Participant 7

Really it was uncomfortable for me at that moment. At the same time, I was anxious about what will be the result after the test. You know is either positive or negative I was anxious of what will be the outcome hummm……........well those were my experience…………….Participant 8

b) Spouse not in support

Some respondents demonstrated their misconceptions about cervical screening practice by mentioning the reasons some people are not practicing cervical cancer screening. One of the reasons is due to the level of understanding of couples about cervical cancer screening.

Whereby a woman's husband does not consent to her going for the cervical screening, could be a barrier, without a decision of her own. But if it is here, the lady knowing that it is for her

own personal health and that ehm……. in that case, if the husband does not give a consent, it can link anything to it and could be a big problem…………………………………..Participant 2
You know in some culture they believe you inform your husband and if your husband gives consent, if he does not give consent any you know most of those things, men do not really believe it……………………………………………………………………………………..Participant 6

c) Paying out of pocket

Well, aside from the fact that in my home country, it is out-of-pocket, the government has not started encouraging free cervical cancer screen, at least none that I know of, they have started now that I don't know about it, but I know that most of the cervical cancer screen is out of pocket, it is privately sourced, most of them are either from private hospitals or private laboratories………………………………………………………………..Participant 4
Like I said earlier, in Nigeria, they charged money that earlier discouraged me from going for the screen, but here in UK, it is done free of charge. So many people might have done cervical screening here in UK unlike Nigeria…………………………………………………Participants 2

All the participants repeatedly emphasize on out of pocket as influence on practice of cervical screening as the barrier why some women do not practice cervical cancer screening in Nigeria, and they also rated out of pocket of cervical cancer screening on a scale of 1 to 10 (1 = lowest and 10 = highest). Figure 2 shows the participants rating of out-of-pocket influence practice of cervical cancer screening.
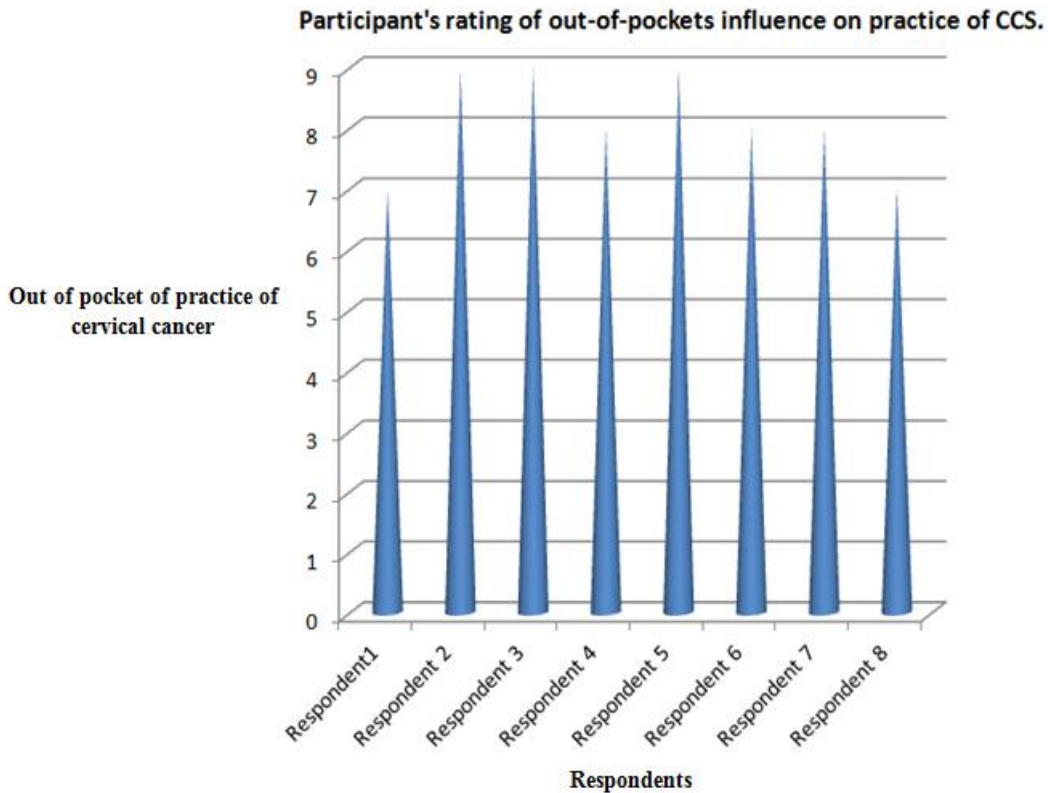

Figure 2. Participants rating of out-of-pocket influence practice of cervical cancer screening

d) Summary of findings from theme three

The finding from this study shows the structural and economic restrains that can influence the practice of cervical cancer screening among Nigerian in terms of experience of pain, fear of outcome of screening, spouse not in support, Respondent response showed the beliefs in the practice of cervical screening based on the experience. Based on participants' experience and perception of cervical cancer screening among the participants, it revealed that paying out of pocket, spouse not in support and misconception of cervical screening are major barriers that influence the practice of cervical screening. These barriers must be investigated to promote the practice of cervical screening. The participant also affirmed that this belief and what they may face during the screening is a big concern that limit the practice of cervical screening for some students, and these will certainly not allow them to take step in practice cervical cancer screening. The participants agreed and had high rate that they can recommend cervical screening to their friends and families.

5. DISCUSSION

Findings from theme one showed that the participants' level of awareness is high but differs based on individual opinions, but it revealed a positive outlook in terms of knowledge and the importance of screening to their health. Participant's knowledge and importance of the screening also suggest their perception of the cervical screening despite their previous experience of cervical screening. The level of knowledge and awareness they encountered during the practice of the screenings superseded any discomfort they encountered. This is in concordance with some studies (Omorogbe & Ehizemwogie, 2019; Owoeye & Ibrahim, 2013). However, this is in contrast with the study conducted by Allagoa et al (2020) in Nigeria which assess the knowledge and awareness of the university students. The result revealed low level of awareness of cervical screening; the test was low. Findings from theme two revealed that there was socio-cultural restrain to the practice of cervical cancer screening among the participants obviously by their response to the barriers to the practice of cervical cancer screening. Participants' experience of the practice of cervical cancer screening showed that religion belief of the participant serves as a barrier to the practice of cervical screening. Another finding is the cultural belief that was mentioned by the participants. This was indicated by the participant's response to the question on barrier to the practice of cervical screening. This means that individual culture can limit their practice of the screening. This aligns with the work of Anaman-Torgbor et al (2017) on barriers and facilitators of cervical cancer screening that religion and cultural belief hinder the practice of cervical cancer screening. It also supports Rasul et al (2015) perception of cervical screening, which showed that participant spirituality (religion) influences the practice of cervical cancer screening. Based on participants' experience and perception of cervical cancer screening, it revealed that (1) paying out of pocket, (2) spouse not in support and (3) misconception of cervical screening are major barriers that influence the practice of cervical screening. The participant also affirmed that belief and experience during the screening are a big concern that limits the practice of cervical screening for some students. This shows agreement with study by Anaman-Torgbor et al (2017), who revealed that the major reason why the participants are not practicing cervical screening earlier was due to the pain they experienced during the insertion of Cusco Speculum. This is in synchrony with the work of Kabiri and Komuhangi (2021); determining the facilitators, barriers and background factors

associated to cervical cancer screening among female undergraduate students in Makerere University. It showed that fear of negative result serves as a barrier for the practice of cervical cancer screening among the participants. This agrees with the work of Annan et al (2019) on perceived seriousness mediating the influence of cervical cancer screening. Paying out-of-pocket was mentioned as barrier that limits the practice of the screening. This support with the work of Anaman-Torgbor et al (2017); paying out of pocket to do the test was really challenging for some women that are living from hand to mouth to continue the practice of cervical cancer screening. These are major barriers that limit the practice of cervical cancer screening in developing countries like Nigeria. This is in accordance with work of Eze et al (2018); cervical cancer awareness and cervical screening uptake in Nigeria, which revealed that cost and the time it took to acquire results were all cited as reasons for not going for the screening.

6. CONCLUSIONS

This study has examined the perception and experience of Nigerian students regarding practice of cervical cancer screening. Participants are those who have done cervical screening at least once in the past and use the interview sharing their previous experience. The interview was conducted face to face transcribed and coded for analysis. This technique assisted us to obtain the necessary information required from these participants in order to prove answers to the research questions. Findings from the study showed a high level of perception displayed by the participants. This is evidenced in the response to the interview questions on the perception of cervical cancer screening with respect to the practice of the test in Nigeria. It implied that the participant's experience of cervical cancer screening had no significant impact on the practice of cervical screening in Nigeria thus providing answer to the research question.

This study also showed that there was an elevated level of awareness of cervical cancer screening among the Nigerian students as evidenced in participant's knowledge of cervical cancer and cervical cancer screening. Although participants' level of awareness differs based on personal experience, it revealed a positive outlook in terms of knowledge, importance, and perception of the cervical cancer screening. Another finding from this study showed the level of socio-cultural restrains experienced by participants in terms of barrier that can influence the practice of cervical cancer screening to prevent cervical cancer from their experience. Participant's response showed that religious belief against the practice of cervical screening depends on their experience. The cost of doing the screening reduces the chances of many Nigerians to practice cervical cancer screening.

The sample used in conducting this research was limited in size due to the prevalence of COVID-19 pandemic that affected data collection, since the research was conducted face to face. In conclusion, we recommend awareness and regular practice of cervical cancer screening as a way of reducing sudden death of the student and women in general.

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