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Perception on cervical cancer and enhancing strategies to screening uptake among women in Bamenda, Cameroon: A qualitative method

Fongang Che Landis^{1,2*}, Nya Yolande-Blandine Fai³, George Enow-Orock^{1,4}, Njajou Omer^{1,5} and Ngowe Ngowe Marcelin^{1,6}

¹Department of Public Health, Faculty of Health Sciences, University of Buea, Cameroon.

²Department of Nursing and Midwifery, Faculty of Health Sciences, University of Bamenda, Cameroon.

³Department of Economic Science and Management, University of Yaounde 2, Soa, Cameroon.

⁴Regional Hospital, Bafoussam, Cameroon.

⁵School of Public Health, University of Minnesota, United States of America.

⁶Department of Clinical Sciences, Faculty of Medicine and Pharmaceutical sciences, University of Douala, Cameroon.

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The treatment of cervical cancer has a good prognosis if diagnosed early. Hence, screening is very vital. The aim of this study was to evaluate the perception of women on cervical cancer and strategies to enhance its screening uptake in the city of Bamenda, Cameroon. Qualitative study was carried out from July, 2019 to August, 2019. Eight focus group discussions were organized in five different quarters in the city of Bamenda. These quarters and participants were purposively selected and each group constituted 6 to 8 Participants. Ethical clearance and administrative authorization for the study were obtained prior to the study. Data was analyzed using thematic analysis with the help of QDA Miner. A total of 53 study participants took part in this study. Their ages ranged between 21 to 45 years. Most participants did not know about cervical cancer. Their perceived barriers to cervical cancer screening included: inadequate sensitization; financial challenges and embarrassing testing strategies; lack of awareness on the availability of screening centers; poor attitude of health personnel. Proposed strategies to enhance cervical cancer screening were: sensitization of the population, recruitment of more competent staff, testing centers should be located closed to the target population, less embarrassing screening methods should be used, health care workers should demonstrate positive attitudes during care, female staff should manage the screening units, screening cost should be subsidized. Due to the Small purposive sample size and qualitative nature of this study, the findings are not generalizable

Key words: Perception, cervical cancer, enhancing strategies, cervical cancer screening, Cameroon.

INTRODUCTION

Globally, more than 270,000 women die of cervical cancer, where the majority are residents of low- and middle-income countries (WHO, 2013; Udoko et al., 2019). In such contexts, women tend to seek healthcare

at a late stage, which makes management difficult (WHO, 2021). The major cause of cervical cancer is Human papillomavirus (HPV) (Okunade, 2020). There are more than 100 types of HPV, of which at least 13 are cancer-

causing (also known as high risk types) (Zare-Bidaki et al., 2022). Studies show that two HPV types (16 and 18) cause 70% of cervical cancers and precancerous cervical lesions (WHO, 2014; Senkomago et al., 2019). According to The Global Cancer Observatory (2021), cervical cancer is the second most prevalent cancer among women in Cameroon with incidence of 13.4%, cumulative risk of 3.61 and death rate of 13.5%.

Nevertheless, it is one of the most preventable and curable forms of cancer if diagnosed early and effectively managed. However, diagnosis of cervical cancer occurs late (Getahun et al., 2013; Pan American Health Organization, 2018). The World Health Organization (WHO) has introduced the 90-70-90 strategic plan to eliminate cervical cancer among women of all countries by 2030. Precisely, this involves the administration of full human papillomavirus (HPV) vaccine to 90% of girls at the age of 15 years and above, conducting screening for 70% reproductive age group women, delivering treatment and care for 90% identified women (WHO, 2013). Unfortunately, Cameroon does not currently have a national strategy for cancer prevention. A national strategic plan for the control of cervical cancer was drafted in 2016, but was not implemented (National Strategic Plan, 2020). In 2015, Cameroon successfully completed the pilot phase to introduce the HPV vaccine for girls aged 9 - 13 years. However, this vaccine had not yet been added into the routine EPI though it is one of the most effective strategy to reduce the incidence of cervical cancer. The cost of the bivalent and quadrivalent vaccine remains high for the population of Cameroon (~XAF 35,000.00 per dose) and advocacy should be done to promote a better access for all social strata (Halle-Ekane et al. 2018; NSPCaPC, 2020).

Some public hospitals and two (2) denominational structures, namely, the Cameroon Baptist Convention Health Services (CBCHS) and the Presbyterian Church in Cameroon Health Services (PCCHS) are doing routine screening and treatment of precancerous lesions of the cervix in some cities (Bamenda, Mbingo, Kumbo, Douala, Mutengene, Kumba, Kribi, Bafoussam, Yaounde and Limbe). Sporadic screening campaigns are organized in outreaches by the NACFAC and some CSOs. However, numerous precancerous lesions cannot be treated due to lack of equipment. Continuous screening will enable a decrease in the incidence and mortality due to cancer (NSPCaPC, 2020). In Cameroon, only the General Hospitals in Douala and Yaounde have the authorized platform for cancer management. Nevertheless the management of cancers generally begins at the peripheral hospitals, despite the absence of national guidelines for management of Cancers (Manga et al. 2017; NSPCaPC, 2020).

Behavioral change communication (BCC) intervention is one of the activities conducted by primary health care workers to increase awareness of cervical cancer prevention, influence social norms, and facilitate behavior change among selected individuals or sub-populations to prevent cervical cancer (Abraham et. al., 2022). Community health workers play an essential role within the community in promoting the acceptability of cervical cancer prevention services through advocacy and providing information about cervical cancer prevention services, identifying eligible groups, and assisting women in making decisions to attend the health facilities for cervical cancer prevention services and engaging cervical cancer survivors (Derbie et al., 2019; Abraham et. al., 2022). However, findings from existing studies indicated that there is low cervical cancer screening behavior at different areas in subtropical regions (Nyangasi et al., 2018; Assefa et al., 2019).

According to Manga et al. (2017), there is profound difficulty faced by patients in getting treatment such as radiation in low and middle-income countries (LMIC) like Cameroon. He also supports the view that cervical cancer prevention via vaccination with routine screening is crucial in addressing the growing burden of cervical cancer in low and middle income countries. He attributed this to the cost of treatment and shortage of radiation treatment infrastructure. In Cameroon, with regards to primary prevention, Cameroon does not have an Integrated Communication Plan (ICP) on modifiable risks factors for cancers. However, sensitization campaigns for the general public are organized by the NACFAC during special days and events, such as during the month of October ("Octobre Rose"). Moreover, under the private initiative of civil society organizations (CSO), some sensitization campaigns are conducted within the community or professional and academic settings. These efforts do not cover the national territory and a large majority of Cameroonians are not yet informed and are continually exposed to risks factors of cancers (NSPCaPC, 2020; Roux et al. 2021). This therefore makes it pertinent to determine the uptake of this preventive measures among women and determine the strategies that these women may prefer so as to increase uptake.

Despite the aforementioned solutions to the prevention of cervical cancer, there is poor uptake of screening and treatment services and the vast majority of deaths occur in women living in low- and middle-income countries (CDC, 2019). Effective methods for early detection of precancerous lesions using cytology (Pap smear) exist and have shown to be successful in high income countries. However, competing health care priorities, insufficient financial resources, weak health systems, and

*Corresponding author. E-mail: landische@gmail.com.

limited numbers of trained reproductive health providers have made high coverage for cervical cancer screening in most low- and middle-income countries such as Cameroon difficult to achieve (WHO, 2013). Considering the relative high population and susceptibility levels of women as well as the relatively low socioeconomic status of women in the city of Bamenda and the fact that knowledge, attitudes have an influence on positive change in behaviour (Fongang et al., 2021), we therefore wondered if these women have adequate knowledge, positive attitude towards cervical cancer, barriers inhibiting these women from fully participating in cervical cancer screening exercises as well as their preferred strategies to overcome these barriers. The purpose of this work was to evaluate the perception on cervical cancer and cervical cancer screening by women in the city of Bamenda, Cameroon by exploring their knowledge, attitudes toward cervical cancer and cervical cancer screening as well as their perceived enhancing strategies and barriers to cervical cancer screening.

MATERIALS AND METHODS

Study design

Qualitative study with an exploratory design and a focus group discussion (FGD) was used for data collection. It included participatory approach with women in the city of Bamenda who have never been screened for cervical cancer and were 21 years and above. Only women who had never been screened before for cervical cancer and gave consent to participate in the study were included in the discussion. A range of variables were investigated comprising knowledge, attitudes towards cervical cancer, perceived barriers to cervical cancer screening and proposed strategies to enhance cervical cancer screening.

Study area

The Northwest Region is the third most populated region in Cameroon. It has one major metropolitan city, Bamenda, with several other towns. The dependency rate in the region is high, particularly in the rural areas as majority of the population is below 20 years (Sheyinsagha et al., 2020). The city is located 366 km (227 miles) north-west of the Cameroonian capital, Yaoundé. Bamenda is known for its cool climate and scenic hilly location (Shey et al., 2017). The city is an amalgamation of seven villages namely: Mankon, Mendakwe, Nkwen, Chomba, Mbatu, Nsongwa and Bandzah. However, considerable portions of outlying suburban areas, including Bambui, Bambili, Bafut and Akum may be considered as part of the Bamenda greater cosmopolitan area, since urban development initiatives are fast engulfing the said areas (Shey et al., 2017). Bamenda is estimated to have a total population of 573,000 inhabitants with about 221889 being women and a growth rate of 3.62 in 2022 (United Nations World Population Prospects, 2022). Cervical cancer screening in Bamenda is primarily carried out by the Baptist Hospitals though other hospitals are progressively getting involved in cervical screening such as: Bamenda Regional Hospital, Presbyterian Hospital Ntamulung and Medicalized Health Center, Nkwen.

Sample size and selection

A purposive sampling method was used in selecting the study

participants and in selecting the quarters in Bamenda. The participants were purposively selected to ensure that only those who have never been screened before for cervical cancer were recruited so that the operationalization of the study variables was consistent for all participants. This is an appropriate sampling technique for the selection of few cases for intensive studies in life history research. The sample size consisted of 53 participants who took part in focus group discussions of 6 to 8 members and in a total of 8 FGD sessions (Table 1). A focus group discussion guide was used to collect information on the major themes of the study. Selection of the participants was announced in areas of public gatherings such as quarter markets, quarter meetings, churches and selection was based on age, location within the city of Bamenda. Each FGD session was made up of homogenous participants. Specifically, each group constituted participant who were all below 30 years of age or they were all 30 years and above of age. The participants in the FGD were grouped in minigroups of 6, 7 or 8 participants drawn from the target population to discuss on cervical cancer. Each quarter had one FGD for small quarters and two FGD for large quarters.

Conducting focus group discussions

The study started by categorizing participants for focus group discussions into groups based on those who met the inclusion criteria and also based on the location of the participants. Through the assistance of community guides (who were identified and selected by community health dialog structure members), participants for focus group discussions were identified. The addresses of participants and their telephone contacts were taken and they were subsequently invited for focus group discussion at quarter halls in specific locations in Swine quarter, Atuakom, Azire Old Church, Azire New church, Mbengwi road, neighbourhoods in the City of Bamenda because these quarters are among the most populated in the city of Bamenda. Direct discussions were conducted in Pidgin and English language. There was a moderator, note taker and a person in charge of recording the discussions in all the focus group discussions. All the FGD were recorded with an audio recorder. The principal investigator was the moderator who is a researcher with experience in qualitative research; the note taker was a trained public health expert and specialized in qualitative research studies; the person in charge of recording and secretaries were bachelor degree holders in secretarial and administrative specialties with skills in qualitative data analysis. Before the FGD, a 10 day training workshop was organized by the principal investigators to train members of the team on the purpose and procedure that will be involved in the research process. Focus group discussions were continuously organized until there was saturation of the information gotten from participants. At the end of each focus group discussion, each record was labeled and stored in an envelope bearing the same label as the booklets of note takers to avoid confusion during translation.

Ethical clearance and administrative procedures

Ethical clearances for this study were obtained from IRB-FHS (1003-07) at the University of Buea, IRB-CBC (IRB2019-31), and IRB of the North West Regional Hospital (N088/APP/RDPH/RHB/IRB).

Administrative authorizations were obtained from the Regional delegate of Public Health at the North West Regional Delegation and Quarter Heads. Each study participant was required to sign a consent form before participating in the study. Participant was free to continue or abandon the process at his or her convenience. Names and personal information revealing participant's identity were concealed. The purpose of recording the FGD was

Table 1. Sample size and selection of the participants who took part in the focus group discussions in Bamenda.

Data collection method	Session	FGD participant	Area	Number of session	Number of participants
FGD	FGD 1	≥30 years women	Atuakom	1	8
	FGD 2	≥30 years women	Atuakom	1	8
	FGD 3	<30 years women	Azire Old Church	1	7
	FGD 4	<30 years women	Azire New Church	1	6
	FGD 5	<30 years women	Azire New Church	1	6
	FGD 6	<30 years women	Mbengwi Road	1	6
	FGD 7	<30 years women	Mbengwi Road	1	6
	FGD 8	≥30 years women	Swine Quarter	1	6
	Total	-	-	8	53

Source: Original work (2022)

explained to the participants and their consent was obtained before this was done. The notes and replayed records were transcribed after the FGD.

Data management

After typing of the focus group discussions, they were given coded names, and each focus group discussion was saved under a specific folder as a separate file. Recording of FGD were handed over to secretaries who participated in the data collection process for transcription. Each transcribed focus group discussion bore the name labeled on the envelope and record. Transcription was done verbatim and Pidgin/French discussions were translated into English language. Typing of focus group discussions was done immediately after translation. The typing was carried out both by secretaries who participated in the transcription and other secretaries who were hired for the purpose.

Data analyses

Development of code tree and analyses of qualitative data

A code tree was created for the qualitative data analysis using QDA Miner. This structure handled all the themes of the study. A branch of this figurative tree represented a major research theme. In some cases, a branch was divided into sub-branches or codes, corresponding to subthemes. In this case, each branch or subbranch handled a code. All qualitative data of similar codes were assembled under a theme. In coding, qualitative data were read and copied into the branches of the code tree that represented the themes. After all focus group discussions had been thoroughly treated following this procedure, each theme with its corresponding data were retrieved, read, and similar ideas were grouped together and common comments were presented in quotation marks.

RESULTS

Table 2 describes the sociodemographic characteristics of the participants. From the table, most (31[58.5%]) of the participants were below 30 years of age. 43(81.1%) had undergone formal education. 32 (60.4%) were single and most (43 [81.1%]) were employed while only 10(18.9%) were unemployed.

Themes 1: Knowledge of the seriousness of cervical cancer

Sub-theme 1: Cervical cancer background information

A majority of the participants did not know what cervical cancer was, though, some of them indicated they had heard the name "cervical cancer" but did not really understand what it was.

"I have never heard about cervical cancer"
FGD4/P1/21years.

"I have heard about cervical cancer but I know nothing about it" FGD1/P3/30 years.

One of them even indicated she did not know if it exist, giving the impression that she doubted the existence. The few who knew about cervical cancer either had the wrong knowledge or just the very basic knowledge about it.

"Cervical cancer is a disease that affects the private part of a woman." FGD7/P1/22 years

"Cancer of the female reproductive system" FGD1/P1/33 years.

Sub-theme 2: Cervical cancer diagnosis

Relatively fewer participants responded to this question, amongst which, majority had heard something about cervical cancer diagnosis but did not really know what it was all about. Only one of them had a basic knowledge of the diagnosis (Table 3).

"I have heard of the test but I don't know the nam"
FGD7/P1/22 year.

"I don't know of any test in particular but I know something is inserted into the private to detect this cancer." FGD5/P1/26 years

Table 2. Socio-demographic characteristics of women in the city of Bamenda who took part in the focus group discussion.

Characteristic	Category	Frequency	Percent
Age group (years)	<30	31	58.5
	≥30	22	41.5
	Total	53	100
Level of education	Informal	10	18.9
	Formal	43	81.1
	Total	53	100
Marital status	Married	21	39.6
	Single	32	60.4
	Total	53	100
Occupation	Employed	43	81.1
	Unemployed	10	18.9
	Total	53	100

Source: Original work (2022)

Sub-theme 3: Prevention of cervical cancer

The majority of the participants responded to this question, with most of them having wrong knowledge or basic knowledge on cervical cancer and attributing prevention to personal hygiene.

“We should keep our private parts clean, wash our underwear with hot water” FGD5/P3/23 years.

“To prevent cervical cancer we should not wash our private parts with soap, we should drink enough water and eat enough fruits to prevent this cancer” FGD2/P1/31 years.

A smaller proportion of them related it to lifestyle practices like cigarette smoking and alcohol.

“Avoid smoking cigarettes and alcohol” FGD3/P1/29 years.

Some of them had no idea about prevention since they did not even know about the disease to begin with.

“We don’t even know about this disease not to talk of knowing about prevention methods” FGD1/P4/36 years.

Sub-theme 4: Knowledge on existing cervical cancer screening centers in Bamenda

Many participants who responded had no idea of existing cervical cancer screening centers in Bamenda. A few who had an idea knew only about one center.

“I don’t know of any” FGD4/P1/21 years.

“Bamenda General Hospital” FGD5/P1/26 years.

Just one respondent knew more than one center.

“Bingo Annex and Bamenda General Hospital” FGD8/P1/30 years.

Theme 2: Attitude towards the seriousness of cervical cancer

Sub-theme 1: Perceived seriousness of cervical cancer

Most of the participants responded to this question and all of them agreed that cervical cancer is a serious health problem a few iterated that it is very serious

“Yes it is serious health issue” FGD1/P3/30 years.

Sub-theme 2: Perceived reasons for seriousness of cervical cancer

Most of the participants responded to this question, a greater proportion attributed its seriousness to the fact that it is deadly. Others attributed the deadliness simply from a general perspective of possible outcomes of any disease in the body.

“It is a serious health issue because cancer kills” FGD4/P2/21 years.

“Since it is an illness in the human body it can kill” FGD5/P4/21 years.

“All diseases can lead to death and so is this cancer too” FGD7/P6/25 years.

A smaller proportion attributed it to the slow onset of the

Table 3. Result summary of FGDs.

Theme	Sub-themes	Characteristics
1. Knowledge on cervical cancer	1.1 Cervical cancer background	1.1.1 Awareness of the existence of cervical cancer
	1.2 Cervical cancer diagnosis	1.2.1 Awareness of the the existence of diagnostic/screening measures.
	1.3 Prevention of Cervical Cancer	1.3.1 Stop cigarette smoking and alcohol
	1.4 Knowledge on existing cervical cancer screening centers in Bamenda	1.4.1 Examples of screening cervical screening centers in Bamenda
2. Attitude towards the seriousness of cervical cancer	2.1 Perceived seriousness of cervical cancer	2.1.1 cervical cancer is a serious health problem 2.2.1 Cervical cancer is deadly
	2.2 Perceived Rationale	2.2.2 Cervical cancer has slow onset of the disease 2.2.3 Cervical cancer is painful and dangerous
3. Suggestions to enhance cervical cancer screening	3.1 Environmental/Health Facilities	3.1.1 Sensitization
		3.1.2 Bring screening centers closer to the population
		3.1.3 Recruit more screening experts
		3.1.4 Reduce screening cost
	3.2 Social aspect	3.2.1 Less invasive and embarrassing methods should be introduced
		3.2.2 Staff should demonstrate a positive receptive attitude towards clients. 3.2.3 More female staff should be incharge of screening to reduce embarrassments
3.3 Political aspect	3.3.1 State should subsidize the cost of screening	
	3.3.2 Create more screening centers	
	3.3.3 Organise regular screening campaigns	
4. Perceived barriers to cervical cancer screening	4.1 Individual aspect	4.1.1 Fear and shame
		4.1.2 Financial constraints
4.1.3 Self-confidence on immunity		
4.1.4 Ignorance		
4.2 Environmental aspect	4.2.1 Long distance between residence and screening centers	

Source: Original work (2022)

disease.

"I considered it dangerous because it has no serious or major symptoms so we can only

realized it when it has eaten deep into our systems" FGD2/P1/31 years.

A few said they heard it was painful and

dangerous.

"I heard it is painful" FGD1/P1/33 years.

"I have heard it is dangerous" FGD1/P3/30 years.

Theme 3: Suggestions to enhance cervical cancer screening

This area focuses on environmental, social and political aspects that could enhance cervical cancer screening among women in the Bamenda, Cameroon.

Sub-themes 1: Environmental/Health facilities

Almost every participant who responded to this question, majority of them were for the opinion that people should be sensitized. Giving the impression that sensitization will improve knowledge level with could lead to practice.

“Women should be sensitize about this illness” FGD2/P1/31 years.

A quarter of the respondents indicated that sensitization in general is not enough, rather sensitizations that lays emphases on the complications of cervical cancer as well as approaches such as door to door campaign, and sensitization in public places were perceived as approaches that could encourage participation in cervical cancer screening.

“Door to door campaign will encourage a lot of people to do this test because as it is most of we do not even know of the existence of this illness. But if people are aware and are being explained the effects of this illness more people will get to do the test” (FGD7/P5/25 years).

“This test should be subsidized and made cheaper to enable people to do it, sensitization should be done in public places such as markets and churches. Also women should be told where exactly how they can do this test for easy location” (FGD8/P3/31 years).

A small proportion proposed that increasing the capacity of the hospital by recruiting more competent staff will enhance cervical cancer screening.

“By recruiting more expert staff in this field who will go around sensitizing and testing people, this way I believe the cost for the test will drop” (FGD2/P1/31 years).

One participant also indicated that sensitization should be done and testing centers should be located closed to the target population in order to reduce the distance between the population and the screening centres.

“Create centers closer to the target population because distance is a barrier and you should emphasize on the symptoms because people will realize this cancer while they identify to these symptoms” (FGD3/P2/23 years).

Sub-themes 2: Social aspect

Few of the women indicated that other screening

methods such as blood test (if it exists) should be exploited as it is going to be more acceptable over physical examination of the cervix which is perceived by them to be embarrassing.

“More women should be encouraged to do this test which is through sensitization. Also the test method can be changed through blood test because not all women are comfortable to undress in front of a stranger because of a test” (FGD8/P1/30 years).

Few participants indicated that health care workers should demonstrate positive attitudes when caring for patients such as expressing love and care when managing patients giving the impression that some health care providers portray negative attitudes when taking care of patients.

“These hospitals should be very welcoming and treat their patients with care especially general hospitals where the nurses are very arrogant” (FGD8/P4/31 years).

Few participants proposed that only female staff should be recruited to work in the cervical cancer screening departments because most patients (females) will feel uncomfortable undressing in front of males.

“The wards responsible for this test should be occupied by women since a woman will easily feel free to undress and do the test in the presence of another woman” (FGD8/P1/30 years).

Sub-themes 3: Political aspect

A smaller proportion was of the opinion that the test should be free. Giving the impression that poverty is one of the impeding factors to cervical cancer screening.

“The test should be done for free” (FGD5/P2/24 years).

A quarter of them were in support of both free testing and sensitization.

“The government should make the test free in that case we all will quickly do the test” (FGD1/P2/33 years).

Theme 4: Perceived barriers to cervical cancer screening

This area focuses on individual and environmental aspects that could prevent women from getting screened against cervical cancer.

Sub-Themes 1: Individual aspect

Majority of the participants responded to this question; a

great proportion of them indicated fear of outcome and shyness as the main reason stopping women from going for the test.

“Fear and shyness stopped some women from doing this test” (FGD4/P3/27 years).

About half of them iterated lack of finances as one of the reasons.

“Financial constraints” (FGD7/P4/23 years).

Fewer respondents associated it to ignorance and self confidence

“Self-confidence some women consider themselves fine so long as they don’t feel any symptoms and for the fact that they think they are practicing every preventives measures” (FGD6/P1/24 years).

“Ignorance of the side effects of this illness will stop many women from doing the test” (FGD7/P6/25 years).

Sub-themes 2: Environmental aspect

A smaller proportion of the respondents attributed it to accessibility in terms of the distances from screening centres.

“Distance is another factor because most screening centers are far” (FGD3/P1/29 years).

DISCUSSION

Participants’ age ranged from 21 to 45 years. This could be as a result of the fact that this is the age in human development (adulthood) wherein health seeking behavior is at its peak due to relative decisional autonomy, educational exposure and financial accessible/stability general observed at this age bracket (Makuza et al., 2015; Kashyap et al., 2019). Older women (>50 years) may not have as much educational exposure and accessibility to health facilities that women of ages (21 to 45 years) may have. Majority of the respondents who had heard about cervical cancer were aware of cervical cancer diagnosis but did not really know much on what it was all about. This is similar to a study by Tapera et al. (2019) on cervical cancer knowledge, attitudes, beliefs and practices of women aged at least 25 years in Harare, Zimbabwe. They found out that cervical cancer patients had better knowledge about the availability of free screening services at local hospital or health facility.

Majority of the participants had poor knowledge or basic knowledge on cervical cancer and linked the cause of cervical cancer to personal hygiene. This is analogous to a study by Tapera et al. (2019) who also found out that

despite relatively good knowledge on risk factors, prevention and treatment, knowledge on cause of cervical cancer remained suboptimal. Cervical cancer patients had low knowledge of causes of the disease as few reported HPV as the cause. This is also similar to a study done by Roux et al. (2021) who found out that one of the barriers to cervical cancer screening in Cameroon is lack of knowledge on cervical cancer.

A smaller proportion of the respondents related the risk factors of cervical cancer to lifestyle practices like cigarette smoking and alcohol. Some of them had no idea about prevention since they did not know about the disease in the first place. This is comparable to a study by Aweke et al. (2017) on knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Ethiopia. The findings of this study showed that less than half of participants presented with poor knowledge regarding vulnerable groups, risk factors, signs and symptoms and methods of prevention of cervical cancer (Aweke et al., 2017; Shepherd et al., 2011). This is also in line with a study of Engbang et al. (2020) carried out in Douala, Cameroon who found out that tobacco was a risk factors to cervical cancer among participants in Douala.

Regarding their awareness of cervical cancer screening centers, many participants had no idea of existing cervical cancer screening centers in Bamenda. A few who had an idea knew only about one center. This could be as a result of lack of access to sensitization campaigns on cervical cancer, lack of adequate sensitization by health care providers, location of screening sites being relatively distal from the population and cost of screening which could be considered to be relatively high. This is similar to a study by Isa et al. (2016) and Linde et al. (2019) who stated that among other factors influencing practice towards cervical cancer, awareness and cost influence participation in screening. Roux et al. (2021) also found out that lack of awareness of the role and existence of a screening programme contributes to preventing cervical cancer screening.

With respect to their attitude towards the seriousness of cervical cancer, most of the participants opined that cervical cancer is a serious health problem and few further perceived it as very serious. A greater proportion of these women attributed its seriousness to the fact that it is deadly. Others attributed the deadliness simply from a general perspective of the possible outcomes of any disease in the body while a smaller proportion attributed it to the slow onset of the disease. A few simply said they heard it was painful and dangerous and did not perceive them as being vulnerable of contracting the disease. This is akin to a study by Aweke et al. (2017) who found out that less than half of the respondents believed that all women are at risk of getting cervical cancer. They indicated that their findings showed that participants had much lower awareness level about risk groups when compared to findings of other studies done in Ethiopia

and other countries. This could be attributed to low attention given to media promotion, variations in health information provision about cervical cancer and its exposure, differences in socio-cultural conditions, health education at healthcare facilities and other behavioral change interventions (Aweke et al., 2017, Shepherd et al., 2011). This is also supported by Linde et al. (2019) who found out in her study that cervical cancer was perceived as a dangerous disease that was linked to 'death' and many women in their study perceived its seriousness to be worse than that of HIV. This could also be as a result of the fact that the prevalence of cervical cancer in Bamenda has been on a rise over the years. This is similar to a study by Ngwayu et al. (2019) who found out that cancer of the cervix was the predominant type of cancer in the Bamenda Regional Hospital and was far higher than the prevalence reported in 2012 in Yaounde-Cameroon

As per their suggestions to enhance cervical cancer screening, almost every participant was of the opinion that people should be sensitized with emphases on the complications of cervical cancer as well as approaches such as door to door and sensitization in public places were perceived as approaches that could encourage participation in cervical cancer screening. This is supported by ACCP (2004) which stated that women who learn or perceive that a screening test is necessary or beneficial are more likely to participate in screening. Also, some data from studies conducted in both developed and developing countries on the determinants of participation proved that women with greater knowledge about cervical cancer screening are more likely to participate (IARC, 2004). Sensitization could enhance knowledge level of women which could lead to practice of preventive measures. This is in line with findings of Anny et al. (2022) precisely in Yaounde who suggested that it is important to diversify the means of communication on cervical cancer while focusing specifically on groups associated with the greatest lack of screening participation in order to enhance screening uptake

A small proportion of the participants proposed increasing the workforce of the hospital by recruiting more competent staff. One participant also indicated that testing centers should be located close to the target population in order to reduce the distance between the population and the screening centers. This is buttressed by Helda et al. (2005) who recommended that health educators must consider accessibility to care when locating screening sites and should consider accessibility in terms of distance and financial capabilities of the participants.

Few of the women indicated that other screening methods and routes such as blood test should be exploited as it is going to be more acceptable over physical examination of the cervix which is perceived by them to be embarrassing and frightening. This is similar to a study by Linde et al. (2019) who found out in her

study that most women were not comfortable with gynaecological examination and considered it as an impeding factor to screening as a few women thought the examination entailed that the cervix was pulled outside the body during the examination, which frightened them. Another study in Kumbo, Cameroon by Layu et al. (2019) had a similar finding where they found out that many women do not participate in cervical cancer screening because they are shy as they find the method embarrassing.

Participants also indicated that health care workers should demonstrate positive attitudes when caring for patients such as expressing love and care when managing patients. This is in agreement with a study by Helda et al. (2005) who recommended in his second lesson that health care providers need to show a "caring attitude" as defined by their clients. This is also in line with a study by Isa et al. (2016) who found out that discriminatory attitudes among health care providers prevents women from partaking in screening.

Some participants proposed that only female staff should be recruited to work in the departments that are in charge of screening because most patients (females) will feel uncomfortable undressing in front of males. This is similar to a study by Isa et al. (2016) who found out that there was a lack of desire to undergo pelvic examination necessary for cervical cancer screening in the clinic when they are being attended to by male healthcare providers. They linked it to the fact that the Islamic culture and religion has a specific tradition and lifestyle that shapes women's actions, behaviours, health practices, beliefs, expectations, gender roles and self-care.

A smaller proportion of respondents were of the opinion that the test should be free; the number of testing centers should be increased; the test price should be subsidized and frequent campaigns and sensitization should be also carried out. This is supported by Helda et al. (2005) who recommended that health educators must consider accessibility to care when locating screening sites and should consider accessibility in terms of distance and financial capabilities of the participants. This is also in line with a study by Halle-Ekane et al. (2018) who found out that the low cervical cancer screening uptake was attributed to barriers such as the cost of screening, lack of information on screening programs, fear, and beliefs that screening is painful.

Concerning their perceived barriers to cervical cancer screening, majority indicated fear and shyness as the main reasons stopping women from going for the test. About half of them iterated that lack of finances is also one of the reasons. Fewer respondents associated it to ignorance and self-confidence. This is similar to a study by Linde et al. (2019) and Isa et al. (2016) who stated that perceived challenges for screening attendance include awareness, emotional costs, in the form of fear of the disease, fear of the gynaecological examination as well as direct and indirect economic costs, such as

transportation costs. A smaller proportion of the respondents attributed it to accessibility in terms of the distances from screening centers. This is similar to Isa *et al.* (2016) who stated that indirect economic costs, such as transportation costs were some of the perceived challenges for screening attendance. Also, ACCP (2004) had similar findings in that the main barriers to service delivery are: the lack of accessible and available of high-quality services.

Limitations

The major limitation of this study was the fact that a purposive sample was used which is typically insignificant and unrepresentative. Participants may be influenced by the Focus Group methodology to give answers that they believe to be socially acceptable. A purposive sampling technique was used which could be subject to selection bias. Hence, many quarters involved in commercial activities in Bamenda were used in order to recruit many participants with diverse backgrounds so as to capture a wealth of information and minimize any potential selection bias.

Conclusion

Findings from the FGD showed that a majority of the participants were not knowledgeable on about cervical cancer. Many participants had no idea of existing cervical cancer screening centers in Bamenda. A few who had an idea knew only about one center. Most of the participants presented a positive attitude towards the seriousness of cervical cancer as they perceived it to be a serious health problem. Their perceived barriers to screening were: fear and shyness; lack of finances; ignorance; self-confidence; and accessibility in terms of the distances from screening centers. Measures suggested by these women to enhance cervical cancer screening were sensitization on the complications of cervical cancer; increasing the capacity of the hospital by recruiting more competent staff; testing centers should be located closed to the target population in order to increase accessibility; other screening methods such as blood test (if available) were considered more acceptable; health care workers should demonstrate positive attitudes when caring for patients such as expressing love and concern when managing patients; only female staff were preferred to be recruited to work in departments that are in charge of screening.

CONTRIBUTIONS TO KNOWLEDGE

Consensus of opinions from FGDs pointed to the preference sensitization that is personalized to serve as a clue to action. Preference is given to messages that focus on the causes, prevention and complications of

cervical cancer as well as screening sites.

SUGGESTION FOR FUTURE STUDIES

A follow-up study should be carried out using a quantitative method and a probability sampling method.

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ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The research has been approved by Institutional Review Board of the Faculty of Health Sciences at the University of Buea, Institutional Review Board of the North West Regional Hospital.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Abraham TG, Ziad E, Wadu W, Demuma A, Shemsedin B, Minyahil TB, Seth CYA, Benedict OA, Yitbarek W, Kasahun GT (2022). Uptake of cervical cancer screening and its predictors among women of reproductive age in Gomma district, South West Ethiopia: a community-based cross-sectional study. *Infectious Agents and Cancer*. Available at: <https://doi.org/10.1186/s13027-022-00455-x>
- Alliance for Cervical Cancer Prevention (ACCP) (2004). *Improving Screening Coverage Rates of Cervical Cancer Prevention Programs: A Focus on Communities*. Seattle. ACCP; o. 4. <http://screening.iarc.fr>.
- Anny N, Jean DK, Sadeu GW, Esther NU, Jovany FT, Jean MK (2022). Factors Associated With Non-Participation In Cervical Cancer Screening In Yaoundé: A Mixed Quantitative And Qualitative Study. *Research square*, DOI: <https://doi.org/10.21203/rs.3.rs-1277059/v1>
- Assefa AA, Astawesegn FH, Eshetu B (2019). Cervical cancer screening service utilization and associated factors among HIV positive women attending adult ART clinic in public health facilities, Hawassa town, Ethiopia: A cross-sectional study. *BMC health services research* 19(1):1-11.
- Aweke YH, Ayanto SY, Ersado TL (2017). Knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Hadiya zone, Southern Ethiopia: Community-based cross-sectional study. *PLoS ONE* 12(7):e0181415
- Center for Disease Control and Prevention (2019). *Inside Knowledge, Cervical Cancer CDC Factsheet* [Internet]. January, 2019 Available from: <https://www.ncbi.nlm.nih.gov/pmc/?term=cervix+cancer>
- Derbie A, Mekonnen D, Yismaw G, Biadglegne F, Van Ostade X, Abebe T (2019). Human papillomavirus in Ethiopia. *VirusDis* 30(2):171-9. <https://doi.org/10.1007/s13337-019-00527-4>.
- Engbang PNJ, Henri E, Valère MK, Paul NNJ, Pascal F. (2020). Risk factors of cervical cancer in two reference Hospitals of Douala: a case-control study. *Cancer Science & Research* 3(1):1-6.
- Fongang CL, Enow-Orock G, Njajou O, Ngowe NM (2021). Knowledge, Attitude and Practice toward Cervical Cancer and Cervical Cancer

- Screening and Its Associated Factors among Women in the City of Bamenda, Cameroon" Published in International Journal of Trend in Scientific Research and Development 5(4):1490-1506.
- Getahun F, Mazengia F, Abuhay M, Birhanu Z (2013). Comprehensive knowledge about cervical cancer is low among women in Northwest Ethiopia. *BMC Cancer* 13(1):1.
- Halle-Ekane GE, Nembulefack DK, Oroch GE, Fon PN, Tazinya AA, Tebeu PM (2018). Knowledge of Cervical Cancer and Its Risk Factors, Attitudes and Practices towards Pap Smear Screening among Students in the University of Buea, Cameroon. *Journal of Cancer and Tumor International* 7(4):1-11.
- Helda P, Miguel P, Victor T, Vickie K (2005). A qualitative study about cervical cancer screening among Latinas living in a rural area of California: lessons for health educators. *American Journal of Health Education* 36(4):228-236.
- International Agency for Research on Cancer (IARC) (2004). *IARC Handbook of Cancer Prevention. Volume 10, Cervix Cancer Screening*. Lyon: IARC Press.
- Isa-Modibbo F, Dareng E, Bamisaye P, Jedy-Agba E, Adewole A, Oyenyin L, Adebamowo C (2016). Qualitative study of barriers to cervical cancer screening among Nigerian women. *BMJ open* 6(1).
- Kashyap N, Krishnan N, Kaur S, Ghai S (2019). Risk factors of cervical cancer: a case-control study. *Asia-Pacific journal of oncology nursing* 6(3):308-314.
- Layu D, Fanka KN, Dohbit JS, Claude NN, Fala B, Joyce S, Samuel NC (2019). Assessing the uptake of cervical cancer screening among women aged 25-65 years in Kumbo West Health District, Cameroon. *Pan African Medical Journal* 33:106. doi:10.11604/pamj.2019.33.106.16975
- Linde DS, Rasch V, Mwaiselage JD, Gammeltoft TM (2019). Competing needs: a qualitative study of cervical cancer screening attendance among HPV-positive women in Tanzania. *BMJ Open* 9(2):e024011.
- Makuzi JD, Nsanjimana S, Muhimpundu MA, Pace LE, Ntaganira J, Riedel DJ (2015). Prevalence and risk factors for cervical cancer and pre-cancerous lesions in Rwanda. *Pan African Medical Journal* 22(1):26
- Manga S, Kanjo M, Ngwa W (2018). Challenges with Cervical Cancer Treatment in Cameroon. *Obstetrics and Gynaecology Cases - Reviews* 4(2):1-5. Available from: <https://clinmedjournals.org/articles/ogcr/obstetrics-and-gynaecology-cases-reviews-ogcr-4-104.php?jid=ogcr>
- National Strategic Plan for Prevention and Cancer Control (NSPCaPC) 2020-2024 for Cameroon <https://www.iccp-portal.org/plans/national-strategic-plan-prevention-and-cancer-control-2020-2024>
- Ngwayu CN, Samuel NC, Takang W, Judith KAK, Brenda MY, Cho SA, Joyce MT, Enow-Oroch G, Damian NA (2019). Cervical cancer in the Bamenda Regional Hospital, North West Region of Cameroon: a retrospective study. *Pan African Medical Journal* 32(1). doi:10.11604/pamj.2019.32.90.18217
- Nyangasi M, Nkonge NG, Gathitu E, Kibachio J, Gichangi P, Wamai RG, Kyobutungi C (2018). Predictors of cervical cancer screening among Kenyan women: Results of a nested case-control study in a nationally representative survey. *BMC Public Health* 18(3):1221.
- Okunade KS (2020). Human papillomavirus and cervical cancer. *Journal of Obstetrics and Gynaecology* 40(5):602-608.
- Pan American Health Organization (2018). *Plan of Action for Cervical Cancer Prevention and Control 2018-2030*. 1375:1-47.
- Roux AN, Kenfack B, Ndjalla A, Sormani J, Wisniak A, Tatrai K, Schmidt N (2021). Barriers to cervical cancer prevention in rural Cameroon: a qualitative study on healthcare providers' perspective. *BMJ open* 11(6):e043637.
- Senkomago V, Henley SJ, Thomas CC, Mix JM, Markowitz LE, Saraiya M (2019). Human papillomavirus-attributable cancers—United States, 2012–2016. *Morbidity and Mortality Weekly Report* 68(33):724.
- Shepherd HL, Butow PN, Tattersall MHN (2011). Factors which motivate cancer doctors to involve their patients in reaching treatment decisions. *Patient education and counseling* 84(2):229-235.
- Shey ND, Clement ANJ, Wung BA, Ivo KK (2017). Community Health Workers' Knowledge, Attitudes and Practices Regarding Malaria Control and Prevention in Bamenda, Cameroon: A Community Based Study. *Journal of Health & Medical Informatics* 8(294):2.
- Sheynsagha D, Tatah EK, Njamnshi AK, Sama M, Verla VS, Egbe OT, Faryu WT (2020). Determinants of Caregivers' Involvement in Vaccination Activities in the Polio Eradication Process in Kumbo-East and Nkambe Health Districts, North West Region of Cameroon 8(1):16-29.
- Tapera O, Dreyer G, Kadzatsa W, Nyakabau AM, Stray-Pedersen B, Hendricks SJH (2019). Cervical cancer knowledge, attitudes, beliefs and practices of women aged at least 25 years in Harare, Zimbabwe *BMC Women's Health* 19:91 <https://doi.org/10.1186/s12905-019-0790-6>
- The Global Cancer Observatory (2021). Incidence, Mortality and Prevalence by cancer site. <https://gco.iarc.fr/today>
- Udoko AN, Graff J, Ransone S, Coday M, Gatwood JD, Bailey JE (2019). Characteristics of Health-related Text Messages Preferred by Medically Underserved African-American Patients with Diabetes. *Cureus* 11(9):e5743.
- United Nation-World population Prospects (2022). www.macrotrends.net/cities/20361/bamenda/population>Bamenda, Cameroon Metro Area
- World Health Organization (WHO) (2014). *WHO Comprehensive Cervical Cancer Control*. Geneva pp. 366-378.
- World Health Organization (WHO) (2021). *WHO Guideline For Screening and Treatment of Cervical Pre-cancer Lesions for Cervical Cancer Prevention*.
- World Health Organization (WHO) (2013). *WHO guidelines for screening and treatment of precancerous lesions for cervical cancer prevention*. Geneva 40 p.
- Zare-Bidaki M, Zardast M, Nadjafi-Semnani A, Nadjafi-Semnani M, Javanmard D, Ghafari S, Ghanbarzadeh N. (2022). Investigation of frequency and typing of human papillomavirus among genital warts using a reverse dot blot hybridization approach. *BMC Infectious Diseases* 22(1):1-9.