

Gynecology and Women's Health Care

Perception on Cervical Cancer, Screening Practices and its Determinants Among Women Aged 15-49 in Cibec and Bloc Banen Health Areas, Bonaberi Health District, Douala

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Abstract

Cervical cancer remains a significant public health concern, particularly in low-resource settings where awareness and access to screening are limited. This study explores the perceptions, screening practices, and determinants of cervical cancer screening among women aged 15-49 years in Cibec and Bloc Banen Health Areas, Bonaberi Health District, Douala, Cameroon. A descriptive cross-sectional study was conducted with 226 participants selected through stratified and systematic random sampling. Data were collected using structured questionnaires and analyzed using SPSS version 25.0.

Findings revealed that 66.8% of participants had heard of cervical cancer, but only 50.4% were aware of screening methods, and a mere 7.5% had ever undergone screening. Barriers to screening included lack of awareness (61.2%), limited accessibility to screening facilities (10.5%), embarrassment (5.7%), and fear of the procedure (5.3%). Socio-demographic factors, including education level ($p < 0.005$), marital status ($p = 0.018$), and age group ($p = 0.010$), were significantly associated with screening uptake.

Despite ongoing public health interventions, cervical cancer screening rates remain critically low due to socio-cultural beliefs, economic constraints, and inadequate healthcare infrastructure. The study underscores the urgent need for targeted health education campaigns, community-based outreach programs, and policy-driven improvements in screening accessibility. Increasing awareness, addressing cultural stigmas, and integrating screening services into routine healthcare can enhance early detection and reduce cervical cancer mortality. Implementing these strategies aligns with global health goals, including SDG 3 (Good Health and Well-being) and SDG 5 (Gender Equality).

Keywords : Cervical Cancer, Screening Uptake, Knowledge and Awareness, Pap Smear, Barriers to Screening, Public Health Interventions, Women's Health, HPV Vaccination.

Background

Cervical cancer remains one of the leading health hazards affecting a majority woman across the globe. (Donatus et al. 2019). Globally, cervical cancer places a large burden on individual women, families, economies, and impoverished health systems. Cervical cancer is the fourth most common

cancer among women globally, with an estimated 570,000 new cases in 2018 (WHO,2018.) The majority of deaths from cervical cancer occur in less developed regions(Darj, Chalise, and Shakya 2019). Nearly 90% of cervical cancer deaths occur in developing parts of the world (Nkfusai, Cumber, Williams, et al. 2019).

In Africa, the incidence is 80 000 per annum, with an annual mortality rate of 75%; with most cases in sub-Saharan Africa (Nkfusai, Cumber, Anchang-Kimbi, et al. 2019). The high incidence of cervical cancer in developing countries may be explained by low awareness and inability to successfully implement nationwide screening programs.(Denny et al. 2014). Cervical cancer is easily treatable if diagnosed early but the uptake of cervical cancer screening services remains poor especially in less developed countries. This poor uptake poses a huge impact on individual women, families, economies and the entire health system. This is explained by the high prevalence and incidence of cervical cancer that have increased mortality, morbidity and disability. Women in rural and low-income settings face various challenges relating to education, geography, cost, access to health care, and family acceptance to seek care, that may not exist in high-income areas. A recent study from Nepal shows that women have to adjust to decisions being made about their health and access to health care by members of their husband's family (Darj, Chalise, and Shakya 2019). Due to cultural norms, most women are not used to talking about reproductive matters, nor are they encouraged to do so, as genitals are perceived as shameful and should be hidden.

In Cameroon, Cervical cancer (CC) is the second most encountered cancer in women after breast cancer with 7.1million women with ages 15 years and above who are at risk of developing the diseases(Donatus et al. 2019). Cervical cancer prevalence in Cameroon was shown to be up to 13.8%; based on a study carried out in the capital city Yaoundé (Nkfusai, Cumber, Anchan g-Kimbi, et al. 2019). There are 1993 new cases of cervical cancer yearly of which 1120 die of the disease(Nkfusai, Cumber, Anchang-Kimbi, et al. 2019).

WHO recommends screening to begin at age of 30 but the Cameroon National Committee for the fight against cancer recommends beginning at age 25(Manga, Kanjo, and Ngwa 2017). Screening a woman just once between 30 and 49 years reduces substantially her risk of developing the disease (Manga, Kanjo, and Ngwa 2017).

Even with effective treatment, 5-year free survival appears low. Fortunately, the disease is one of the most preventable cancers worldwide and with vaccination and routine screening; cancer of the cervix can become eradicated in the ensuing decades with strong government policies on primary and secondary prevention. This will need a collaborative effort of the women, health care providers, families and the community at large(Manga, Kanjo, and Ngwa 2017). It is therefore imperative for screening programs for cervical cancer to be enforced through outreach programs. Health education and communication is an important tool that can be utilized in the improvement of uptake of cervical cancer screening services. Studies have shown that, women's knowledge level, motivation for screening and other psychosocial factors determine their health seeking behavior but few studies have been carried out in Cameroon particularly in Douala. The aim of this study is therefore to explore the knowledge levels on cervical cancer, screening practices and their determinants among women of

reproductive age (15-49 years) in Douala precisely in Bonaberi health district.

Cervical cancer remains one of the leading health hazards affecting a majority woman across the globe. The high mortality rate from cervical cancer globally could be reduced through a comprehensive approach that includes prevention, early diagnosis, effective screening and treatment programs. Despite the precarious situation, the uptake in cervical cancer screening service remains poor.

Cervical cancer remains a call for concern as it has become a major public health problem. Early screening for detection of precancerous cells have been identified as a major step to reducing mortality resulting from cervical cancer, but the uptake of these services remains poor especially in less developed countries.

In 2018, cervical cancer was reported by the WHO as the fourth most common cancer in women in the world with 311,365 deaths. In Africa, there are 99,038 new cases with 60,098 deaths annually. In Cameroon, Cervical cancer (CC) is the second most encountered cancer in women after breast cancer with 7.1million women with ages 15 years and above who are at risk of developing the diseases, with a prevalence rate of up to 13.8%; based on a study carried out in the capital city Yaoundé.

As earlier mentioned, there exist different programs and interventions put in place to reduce the incidence and prevalence of cervical cancer. Despite these strategies put in place to improve screening, the uptake of this service is still low. Many studies have reported low knowledge level, lack of awareness about cervical cancer, psychosocial and cultural factors that serve as barriers to screening.

The consequences of delayed or inaccessible cancer care are lower likelihood of survival, greater morbidity and higher costs of care, resulting in avoidable deaths and disability from cancer. Early diagnosis improves cancer outcomes by providing care at the earliest possible stage and is therefore an important public health strategy in all settings. It is therefore important to find out and analyze women's knowledge level on cervical cancer and perception of screening services which are determinants of its utilization.

Research Questions

1. What is the knowledge and awareness level of women of reproductive age (15-49 years) in Bonaberi Health District with respect to cervical cancer?
2. How do women of reproductive age in Bonaberi health district perceive cervical cancer and its screening?
3. What are the sociodemographic factors associated with accessing cervical cancer screening services in women of reproductive age in Bonaberi health district?

Research Objectives

To address the existing questions, the following objectives were set

General Objective

Generally, to explore and describe knowledge and perception of women of reproductive age regarding cervical cancer and to identify and characterize sociodemographic factors associated with accessing cervical cancer screening services among women of reproductive age (15-49 years) in Bonaberi health district.

Specific Objectives

Specifically, to;

1. Determine the level of knowledge of cervical cancer and its screening among women of reproductive age in Bonaberi health district
2. describe how women of reproductive age (15-49 years) in Bonaberi health district perceives cervical cancer and its screening.
3. Identify and characterize sociodemographic factors associated with accessing cervical cancer screening services among women of reproductive age (15-49 years) in Bonaberi health district.

Materials and Methods

This study was carried out in two communities in Bonaberi health district in the Littoral region of Cameroon (Cibec and Bloc Banen). Douala (German: *Duala*) is the largest city in Cameroon and its economic capital. It is also the capital of Cameroon's Littoral Region. It handles most of the country's major exports, such as oil, cocoa and coffee, timber, metals and fruits. As from 2018, the city and its surrounding area had an estimated population of 2,768,400. The city sits on the estuary of Wouri River and its climate is tropical. (Sylvain Andzongo 2019). Douala typically features warm and humid conditions with an average annual temperature of 27.0 °C (80.6 °F) and an average humidity of 83%. Douala experiences on average of roughly 3,600 millimeters (140 in) of precipitation per year. Its driest month is December, with an average 28 millimeters (1.1 in) of precipitation falls, while its wettest month is August, with an average nearly 700 millimeters (28 in) of rain falls. (Encyclopædia Britannica 2020). Though French and English are official languages in Cameroon, Douala is primarily francophone. The city of Douala is divided into seven districts (Akwa, Bassa, Bonabéri, Bonapriso, Bonanjo, Deïdo and New Bell) and it has more than 120 neighborhoods.

Bonaberi, the focus of this study, has a surface area of 890 km² and is situated on the western part of Douala. Located in the coastal plain of the Wouri estuary. It is primarily an industrial neighbourhood but is gradually becoming a mixed area including more residential and commercial areas. It is connected by the two only bridges of the city. It is also the main opening toward the western anglophone area of the country. Here, the wet season is overcast, the dry season is mostly cloudy, and it is hot and oppressive year-round. Over the course of the year, the temperature typically varies from 74°F to 91°F and is rarely below 72°F or above 94°F. (Andrew Ako Ako 2020). **Bonabéri with its 8,091 citizens situated** across the Bonaberi bridge, gives it direct access to Bonaberi port, and indirectly Doula port. As such its infrastructural

links are extremely well established, reflecting the extremely mature status of the industrial zone. Industry covers a wide range of activities, and in particular cement. (WORLD BANK 2020). Due to the industrialization of the town, inhabitants of Bonaberi are mainly involved in industrial activities such as material handling, transportation or storage; manufacturing; maintenance; treatment; or disposal. The very common economic activities in this locality are; fishing, business i.e. buying and selling, extraction of raw material like sand from beneath the Wouri river. Bonaberi has a patriarchal social structure, in which women have to adjust to decisions being made about their health and access to health care by their husbands or members of their husbands' families. The reason for choosing this area is because, very few studies regarding cervical have been done in this locality.

Study Design

This study employed a descriptive cross-sectional study design in which 226 eligible women were recruited, in two (2) Health Areas (Cibec, and Bloc Banen) of the Bonaberi Health District. Participants from these communities were selected using three sampling techniques; simple random stratified probability sampling, random systematic probability sampling and convenience non probability sampling. This research made use of semi structured questionnaires which were pre-tested and validated to collect information on sociodemographic profile, cervical cancer knowledge/attitude/perception and associated factors for uptake in cervical cancer screening. Collected data were keyed into Epi info version 7.2 statistical software and exported to SPSS Version 25.0 for analysis. Results were presented on tables. Level of significance was set at P-value < 0.05.

Study Population

Bonaberi has an estimated population of 8901 citizens (WORLD BANK 2020). It is noted that, inhabitants of Bonaberi locality are mostly involved in petit business like buying and selling and even the younger age group 15-25 years who are students are also involved in business as most of them join their parents at business places after school. The reproductive age population of this district are mostly students and business people.

Inclusion Criteria

Those who were included in this study were; women of reproductive age who were inhabitants of either of the two selected communities and who fell within the reproductive age group (15-49 years).

Women aged between 15-49 years who had been residing in the Bonaberi Health District for at least one year, and are inhabitants of either of the two selected communities. Those who met the above criteria and were willing to participate by accepting to fill the consent form.

Exclusion Criteria

Women of reproductive age 15- 49 years living in Bonaberi health district but who were not inhabitants of either of the

two selected communities. Women below 15 years and above 49 years though are inhabitants of either of the two selected communities and had been residing in the district for at least one year.

Those unwilling to participate i.e. those who refused to give their consent to participate in the study even though they were women of reproductive age 15-49 years and had been residing in either of the two chosen communities for at least one year.

Those who fit the inclusion criteria but withdrew from the study. Women 15-49 years of age who had not been resident in either of the two selected communities in Bonaberi Health District for up to one year.

Women who fit the inclusion criteria but wanted to be motivated before responding to the questionnaires. And women 15-49 years residing in the selected communities but had undergone complete hysterectomy.

Sample Size Determination

The sample was estimated using the Cochran formula,

$$N_0 = Z^2 \frac{pq}{e^2}$$

Where Z is a constant 1.96 e is the desired level of precision also known as the sampling error; 5%

p = percentage value 100 using prevalence of studied variable, in this case prevalence of cervical cancer screening in Cameroon 19.6% from similar study (Donatus et al. 2019) as percentage value, *p* = percentage

Sampling

This study employed a mixed sampling technique (probability and non-probability sampling techniques). For the probability methods, a simple random stratified sampling method and a simple random systematic sampling was used and for the non-probability method, a convenience sampling method was used.

With respect to the first probability sampling method (simple random stratified), the Bonaberi Health District was divided into Strata, each community represented a stratum. Secondly, the researcher selected two communities based on her ease to accessibility (convenience sampling). The last sampling method employed was the simple random systematic sampling. A landmark was chosen in each quarter, and houses were selected at random (every second house) until one woman in a household who fits the criteria was located. Based on the sample size determined (250 participants), the sample size was evenly distributed between the two selected communities. That is 125 participants per each community. To be able to get a good representation of the community, a member was recruited from each household with priority given to the most elderly person with respect to reproductive age (15-49 years).

Data Collection Procedure

Data was collected from participants using structured questionnaires to gather information regarding sociodemographic characteristics, knowledge attitude and practice towards cervical cancer and its screening and factors influencing screening. All participants who gave their consent were interviewed using a structured questionnaire adapted from a previous study. Prior to its use in this study, a total of 10 respondents from a community in Bonaberi Health District, Bikoko, an area with similar characteristics as those chosen for the study was solicited with the aim of revising poorly structured questions. This was done by estimating the average time required to fill the questionnaire, and eventually validating the use of the questionnaire in the context of this study. A total of 250 questionnaires were administered to participants under study for a period of 6 weeks to assess their uptake of cervical cancer screening among women in the Bonaberi Health District. A total of 226 questionnaires were correctly filled and returned giving a response rate of 90.4%. Questionnaires were prepared in both English and French and were both interviewers administered and self-administered. Some self-administered questionnaires were collected a day after. Materials used for this study were, pens, pencils, papers, laptop, questionnaires.

Data Management

All data was handled with care, and all questionnaires returned were kept together and frequencies tallied at the end. The data was then entered into Epi info version 7.2.

Data Analysis

Collected data were keyed into Epi info version 7.2 statistical software and exported to SPSS Version 25.0 for analysis. Results were presented on tables, bar charts and pie charts. Level of significance was set at P-value < 0.05.

Ethical Consideration

A proposal of the study was submitted to the head of department for bachelor's degree in nursing. A clearance was obtained from the regional delegate of public health and the school. Informed consent was obtained from participants prior to participation and patients' autonomy and confidentiality were ensured. This was to assure participants that all information collected was solely for research purpose and to be kept confidential. Participants were allowed to participate voluntarily.

Results

The results of the research project exploring the perceptions of women on cervical cancer and screening, and also determining associated factors are reported in this chapter. The results of the analyses are presented per study objective and described in tables where stated. The sample size for the analyses was 226 women of reproductive age.

Table 1: Socio-demographic characteristics

| Variable | Frequency | Percentage (%) |
|---------------------------|-----------|----------------|
| Age | | |
| 15-23 | 94 | 41.6 |
| 24-32 | 77 | 34.1 |
| 33-41 | 43 | 19.0 |
| 42-49 | 12 | 5.3 |
| Total | 226 | 100.0 |
| Educational status | | |
| No formal education | 13 | 5.8 |
| Primary | 8 | 3.5 |
| Secondary | 117 | 51.8 |
| Tertiary | 88 | 38.9 |
| Total | 226 | 100.0 |
| Marital status | | |
| Divorced | 1 | 0.4 |
| Married | 80 | 35.4 |
| Single | 141 | 62.4 |
| Widow/ widower | 4 | 1.8 |
| Total | 226 | 100.0 |
| Religion | | |
| Christian | 206 | 91.2 |
| Islam | 11 | 4.9 |
| Other | 9 | 4.0 |
| Total | 226 | 100.0 |
| Occupation | | |
| Self Employed | 91 | 40.3 |
| Student Civil | 82 | 36.3 |
| Servant | 22 | 9.7 |
| Farmer | 16 | 7.1 |
| Other | 15 | 6.6 |
| Total | 226 | 100.0 |

In this study, 226 out of 250 questionnaires were correctly completed and returned which gave a retrieval rate of 90.4%. As in Table 1, the majority of the respondents, 94 (41.6%), were between 15 and 23 years of age and the fewest, 12 (5.3%), were between ages of 42-49 years. 13(5.8%) of the participants had no formal education, 117(51.8%) had secondary education and 88(38.9%) had tertiary education. Of the respondents, 141(62.4%) were single, while 80 (35.4%) were married. Majority was the study population was made up of Christians 206(91.2%), Islam 11(4.9%) and others 9(4.0%). A majority of the study population consisted of self-employed women which made up 40.3% of the study population, followed by students 36.3%, civil servants 9.7% and the least, farmers 6.6%.

Table 2: knowledge and awareness on cervical cancer and screening

| Variable | Frequency | Percentage (%) |
|--|-----------|----------------|
| Ever heard of cervical cancer: | | |
| Yes | 151 | 66.8 |
| No | 73 | 32.3 |
| I don't know | 2 | 0.9 |
| Total | 226 | 100.0 |
| Ever heard of cervical cancer screening: | | |
| Yes | 114 | 50.4 |
| No | 110 | 48.7 |
| I don't know | 2 | 0.9 |
| Total | 226 | 100.0 |
| Cervical cancer description | | |
| Cancer that attacks the cells of the cervix | 97 | 42.9 |
| Could not give a cancer description | 85 | 37.7 |
| A disease that attacks women | 32 | 14.2 |
| A fatal disease/illness that can form into breast cancer | 5 | 2.2 |
| Bacterial infection of the cervix | 5 | 2.2 |
| Abdominal pain/bleeding | 2 | 0.8 |
| Total | 226 | 100.0 |
| Risk factor knowledge | | |
| No response | 131 | 58.0 |
| Sexual promiscuity /oral contraceptives | 18 | 8.0 |
| Multiparity/smoking | 10 | 4.4 |
| Early sexual activity/infection with HPV | 9 | 4.0 |
| Infertility/bleeding | 34 | 15.0 |
| Death/ poor hygiene | 24 | 10.6 |
| Total | 226 | 100.0 |

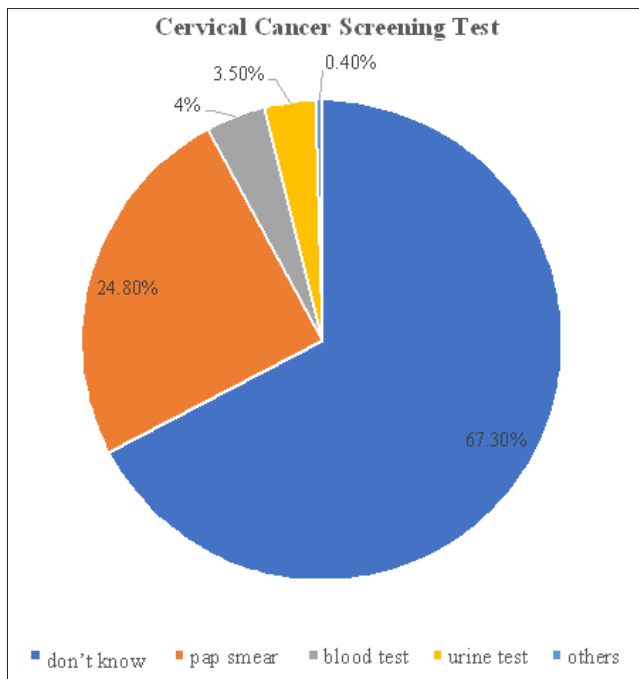


Figure 1: Cervical Cancer Screening Test

A greater percentage of the sample population reported to have heard of cervical cancer n=151(66.8%) and cervical cancer screening n=114(50.4%). However, when asked to describe cervical cancer, n=85(37.7%) could not. Of those who had some information about cervical cancer, a greater percentage (42.9%) of respondents gave a general description of a cancer that attacks the cells of the cervix.

When asked to give at least two risk factors for cervical cancer, only n=37 (16.4%) gave sufficient and correct answers or at least one correct respond. More than half n=131 (58.0%) did not give a single response. The most commonly stated risk factors were: Sexual promiscuity /oral contraceptives n= 18 (8.0%), Multiparity/smoking n=10 (4.4%), Early sexual activity/infection with HPV n=9 (4.0). The rest gave inaccurate responses n=58 (25.7%), some stated some signs of invasive cancer as risk factors such as heavy bleeding, others stated the outcome of death as risk factor.

Also, a majority of the participants, n=152(67.3%) could not identify the basic test used to screen for cervical cancer. Of those who had some information on cervical cancer screening n=56(24.8%), identified pap smear test as the basic test for screening.

Perceptions and Attitude

Table 3: Perception and Attitude

| Variable | Frequency | Percentage (%) |
|--|-----------|----------------|
| Cervical Cancer Preventability | | |
| Yes | 129 | 57.1 |
| I don't know | 87 | 38.5 |
| No | 10 | 4.4 |
| Total | 226 | 100.0 |
| Prevention Method: | | |
| Don't know | 125 | 55.3 |
| Regular screening/treatment | 45 | 20.0 |
| Safe sexual practice | 20 | 8.8 |
| Proper hygiene | 12 | 5.3 |
| Receive HPV vaccine | 10 | 4.4 |
| Proper treatment of STIs | 5 | 2.2 |
| Through prayer | 4 | 1.8 |
| Removing the affected breast | 3 | 1.3 |
| Avoid smoking/alcohol | 2 | 0.9 |
| Total | 226 | 100.0 |
| Frequency for Cervical Cancer Screening | | |
| Don't know | 91 | 40.2 |
| Yearly | 52 | 23.0 |
| Every 2 years | 36 | 15.9 |
| Monthly | 35 | 15.5 |
| 3 times in a lifetime from age 30 | 8 | 3.5 |
| Others | 4 | 1.8 |
| Total | 226 | 100.0 |
| Ever Been Screened for Cervical Cancer | | |
| No | 209 | 92.5 |
| Yes | 17 | 7.5 |
| Total | 226 | 100.0 |
| Reason for Not Screening (N=209) | | |
| Not informed | 128 | 10.5 |
| No facilities available | 22 | 5.7 |
| Shy to expose my private part | 12 | 5.7 |
| Haven't had the opportunity | 12 | 5.3 |
| Told procedure is painful Fear of Result | 11 | 4.3 |
| Haven't had any symptoms | 9 | 3.8 |
| Can't have such a demonic illness | 8 | 3.3 |
| Total | 226 | 100.0 |

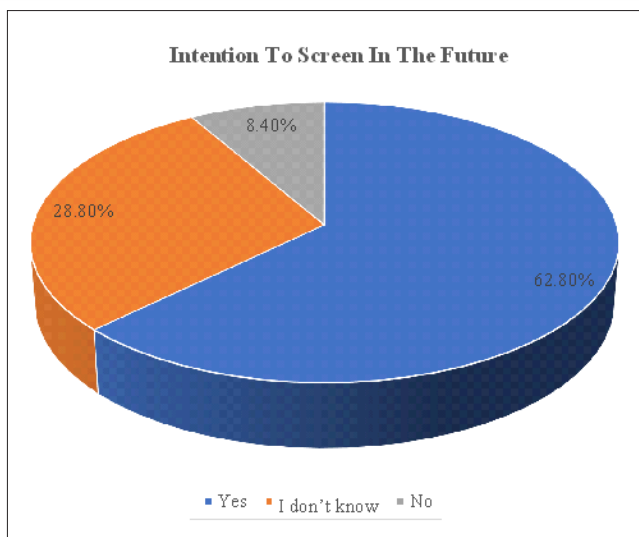


Figure 2: Intention to Screen for C.C in the Future

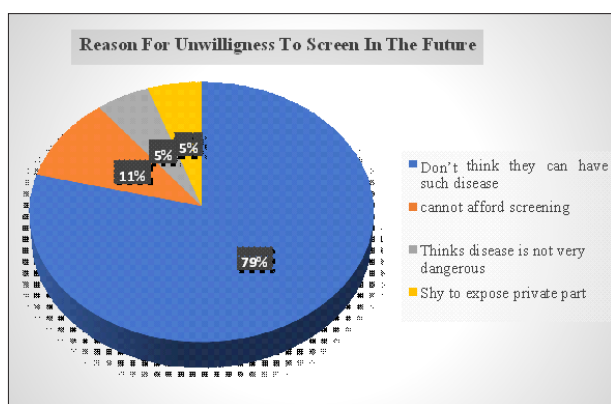


Figure 3: Reason for Unwillingness to Screen for C.C in the Future

When participants were asked if cervical cancer can be prevented, more than half $n=129$ (57.1%) responded that cancer of the cervix can be prevented, $n=87$ (38.5%) did not know and $n=10$ (4.4%) said it cannot be prevented. Of those who knew it can be prevented, a greater percentage correctly stated that early screening and early management can prevent cervical cancer $n=45$ (20.0%). Other preventive measure stated were; safe sexual practices $n=20$ (8.8%), proper hygiene $n=12$ (5.3%), receiving HPV vaccine $n=10$ (4.4%), proper treatment of STIs $n=5$ (2.2%), via prayer $n=4$ (1.8%), removing affected breast $n=3$ (1.3%) and avoiding smoking/alcohol $n=2$ (0.9%). Only $n=8$ (3.5%) knew that women should screen at least 3 times in a lifetime from age 30, others thought women should screen monthly $n=35$ (15.5%), every two years $n=36$ (15.9%), yearly $n=52$ (23.0%) and a majority $n=91$ (40.2%) did not know how many times cervical cancer screening should be done. Out of 226 participants, only $n=17$ (7.5%) had ever screened in their lifetime while a majority $n=209$ (92.5%) had never screened for cervical cancer before. The reasons that were given for not screening previously were; not being informed $n=128$ (61.2%), no facilities $n=22$ (10.5%), shy to expose private part $n=12$ (5.7%), hadn't had the opportunity $n=12$ (5.7%), told procedure is painful $n=11$ (5.3%), fear of results revealing cancer $n=9$ (4.3%), haven't had symptoms $n=8$ (3.8%) and

$n=7$ (3.3%) said they cannot have such a demonic disease. For those who had screened before $n=17$ (7.5%), a majority $n=7$ (41.2%) reported a good and satisfactory experience, others said, procedure was embarrassing $n=5$ (29.4%), procedure was painful $n=4$ (23.5%) and results not received nor explained $n=1$ (5.9%). Intentions for future screening were established and more than half $n=142$ (62.8%) were willing to screen, while $n=65$ (28.8%) said they don't know and $n=19$ (8.4) reported unwillingness to screen in the future. The most common health institution sited as ideal was the district hospital $n=99$ (43.8%), others chose private hospitals $n=64$ (28.3%), others stated no preference but will go to any hospital carrying out the screening $n=63$ (27.9%). The women who expressed unwillingness to screen in the future gave several reasons, a majority $n=15$ (79.0%) said they don't think they can have such a disease, others said they can't afford the screening $n=2$ (10.5%), $n=2$ (5.3%) thinks the disease is not very dangerous and $n=1$ (5.3%) expressed shyness to expose private part.

Factors Influencing Cervical Cancer Screening Uptake

Table 4: Factors influencing C.C screening uptake

| Variable | Frequency | Percentage |
|--|-----------|------------|
| Perceives self at risk | | |
| Yes | 80 | 35.4 |
| No | 66 | 29.2 |
| I don't know | 80 | 35.4 |
| Total | 226 | 100.0 |
| Cervical cancer is a killer if not detected early | | |
| Yes | 156 | 69 |
| No | 63 | 27.9 |
| I don't know | 7 | 3.1 |
| Total | 226 | 100.0 |
| Early screening for cervical helps identifies C.C early which can easily be treated at the early stage | | |
| Yes | 164 | 72.6 |
| I don't know | 60 | 26.5 |
| No | 2 | 0.9 |
| Total | 226 | 100.0 |

Above half of the sample $n=80$ (35.4%) perceived themselves at risk of cervical cancer while $n=66$ (29.2%) did not. Others expressed ignorance (don't know if they are at risk or not) $n=80$ (35.4%). Majority agreed to the fact that cervical cancer is a killer if not detected early $n=156$ (69.0%), while $n=63$ (27.9%) did not know and $n=7$ (3.1%) said it's not a killer.

More than half of respondents $n=164$ (72.6%) agreed that early screening can help identify precancers which can easily be treated at the early stage, while $n=2$ (0.9%) thought otherwise and $n=60$ (26.5%) expressed ignorance.

Association Study

| N=226 | Frequency | Ever been screened | | P-value |
|-----------------------|------------|--------------------|-------------|---------|
| | | Yes | No | |
| Age group | | | | |
| 15-23 | 94 (100%) | 93 (98.9%) | 1 (1.1%) | 0.010 |
| 24-32 | 77 (100%) | 69 (89.6%) | 8 (10.4%) | |
| 33-41 | 43 (100%) | 36(83.7%) | 7 (16.7%) | |
| 42-49 | 12 (100%) | 11 (91.7%) | 1 (8.3%) | |
| Marital Status | | | | |
| DIVORCED | 1 (100%) | 1 (100%) | 0 (0.0%) | 0.018 |
| MARRIED | 80 (100%) | 68(85.0%) | 1 2 (15.0%) | |
| SINGLE | 141 (100%) | 136 (96.5%) | 5 (3.5%) | |
| W I D O W / WIDOWER | 4 (100%) | 4 (100%) | 0 (0.0%) | |
| Educational | | | | |
| No formal education | 13 (100%) | 13 (100%) | 0(0.0%) | <0.005 |
| Primary | 8 (100%) | 7 (87.5%) | 1 (12.5%) | |
| Secondary | 117 (100%) | 116 (99.1%) | 1 (0.9%) | |
| Tertiary | 88 (100%) | 73 (83.0%) | 1 5 (17.0%) | |

As earlier stated in chapter three, level of significance was set at $P\text{-value} < 0.05$. A strong association was established between demographic characteristics (age, marital status and educational level) and screening for cervical cancer as all the P values were less than 0.05, thus accepting the null hypothesis that “there is an association between demographic characteristics and screening for cervical cancer”. This is expatiated in chapter five.

Discussion

The study was aimed at determining the level of knowledge, perception of women regarding cervical cancer and to characterize sociodemographic characteristics that influence uptake of screening services amongst women of reproductive age 15-39 years in Bonaberi Health Area. A total of 226 out of 250 questionnaires were accurately answered and returned giving a response rate of 90.4%. The discussion is presented in sections according to each objective.

Sociodemographic Characteristics

From the results of the study, majority of the respondents, 94 (41.6%), were between 15 and 23 years of age and the fewest,

12 (5.3%), were between ages of 42-49 years. This contrast the study by (Ndikom and Ofi 2012) where majority of the respondents 45.1% (n=37) were between the ages 26-30 years. This difference could be due to the larger sample size of this study(n=206) relative to (n=82) in Ndikom’s study. There was a relationship established between age and uptake of cervical cancer screening as shown by a significant p value of 0.010. Women aged 24- 32years were more likely to screen than the other age groups and this difference was statistically significant(P=0.010). This contrast a similar study by (Donatus et al. 2019) who found no association between age and uptake of cervical cancer screening. This is in line with another study by(Emmanuel, Oluwafolahan, and Sinat 2016) from whose study some demographic factors were significantly associated with uptake of cervical cancer screening such as age with $P=0.050$. Older women between the ages 42-49years were less likely to screen for cervical cancer compared to younger women. This is of great concern since women at these ages should at least have received a second Pap smear (according to the National screening program). Of the respondents, majority n=141(62.4%) were single, while 80 (35.4%) were married. This is in line with a similar study by (Nkfusai, Cumber, Anchang-Kimbi, et al. 2019) with majority of participants (98.8%) single. This can be due to the fact that majority of the participants (41.6%) in this study were of the younger age group15-23years. Married women were most likely to take up cervical cancer screening than those single or widowed and this difference was statistically significant(P=0.018). this is in line with the study by (Ifemelumma et al. 2019) whose study further revealed that there was a significant association between some sociodemographic factors like the age(P=0.001) of respondents, marital status(P=0.001), parity(P=0.013), and duration of practice(P=0.001) with the utilization of cervical cancer screening services. This could be attributed to differences in risk perceptions by marital status. In other studies women explained the role played by marital partners as vital to the utilizing of screening(Ndlovu_2011).

13(5.8%) of the participants had no formal education, 117(51.8%) had secondary education and 88(38.9%) had tertiary education. The likelihood to screen for cervical cancer was highest in women with higher level of education (tertiary) and was statistically significant ($P \leq 0.005$). (Ndlovu_2011) suggest similar results where the level of education achieved seemed to increase the likelihood to screen, twice if a woman had primary education (OR 2.0) and almost 3 times (OR 2.67) if a woman had secondary and higher education. A majority of the study population consisted of self-employed women which made up 40.3% of the study population, followed by students 36.3%, civil servants 9.7% and the least, farmers 6.6%.

Knowledge and Awareness Regarding Cervical Cancer and Cervical Cancer Screening

In this study, a majority of participants 66.8% had previously heard about cervical cancer and this is in line with another study carried out on the assessment of the current state of knowledge and risk factors of cervical cancer among women in the Buea Health District, Cameroon by (Nkfusai, Cumber, Anchang-

Kimbi, et al. 2019) which also revealed a greater percentage of women 57.8% being aware of cervical cancer. The high awareness of cervical cancer among these women could be due to the fact that they were within an urban environment, and thus can easily access information from the internet, mass media, and press print. Another study also agrees with these where the majority of the respondents 74.70% (n=189) had heard of cervical cancer, whereas 25% (n=64) had never (Donatus et al. 2019). With respect to knowledge about cervical cancer screening, a majority of respondents had heard of cervical cancer screening, 50.4% but when asked about the basic screening test for cervical cancer, a majority of participants 67.3% had no idea as to what test is used to screen for cervical cancer, only a few 24.8% correctly stated pap smear test as the basic test for cervical cancer and the least stated blood test and urine test, 4.0% and 3.5% respectively. This contrast another study carried out by (Ifemelumma et al. 2019) in whose study, most of the respondents (89.2%) identified Pap smear as a screening modality. Low knowledge about basic test for screening could be due to the fact that women are less informed about cervical cancer screening and have little exposure to situation to where they could hear about cervical cancer screening such as campaigns, outreach programs. Though majority of participants reported high awareness of cervical cancer, however, when asked to describe cervical cancer, a majority n=85(37.7%) could not. Of those who had some information about cervical cancer, a greater percentage n=97(42.9%) of respondents gave a general description of a cancer that attacks the cells of the cervix. This is in agreement with a qualitative study where participants were aware of cervical cancer but had little or no knowledge on it (Ndikom and Ofi 2012). This can be due to the fact that, many people are not exposed to indebt information regarding cervical cancer and screening. They have only heard of it in a sketchy manner. Lack of sufficient knowledge was demonstrated by more than half n=131 (58.0%) of women not knowing risk factors for cervical cancer. The danger of not knowing risk factors is that chances of prevention of behavioral risk factors are almost non-existent. This then results in a greater proportion of women at risk of cervical cancer When asked to give at least two risk factors for cervical cancer, only n=37 (16.4%) gave sufficient and correct answers or at least one correct respond. Lack of sufficient knowledge was demonstrated by more than half n=131 (58.0%) of women not knowing risk factors for cervical cancer. The danger of not knowing risk factors is that chances of prevention of behavioral risk factors are almost non-existent. This then results in a greater proportion of women at risk of cervical cancer. The most commonly stated risk factors were: Sexual promiscuity /oral contraceptives n= 18 (8.0%), Multiparity/smoking n=10 (4.4%), Early sexual activity/infection with HPV n=9 (4.0). The rest gave inaccurate responses n=58 (25.7%), some stated some signs of invasive cancer as risk factors such as heavy bleeding, others stated the outcome of death as risk factor. This contrast another study where majority of participants 58.99% had good knowledge on the risk factors for cervical cancer(Nkfusai, Cumber, Anchang-Kimbi, et al. 2019) with 62% identified multiple sexual partners as a risk factor of cervical cancer. This could still be due to the sketchy information women have on cervical cancer.

Perception and Attitude

In attempt to understand how these women of reproductive age understand or view this cancer, they were asked if cervical cancer can be prevented, more than half n=129 (57.1%), knew that cancer of the cervix can be prevented, n= 87(38.5%) did not know and n=10 (4.4%) said it cannot be prevented. Of those who knew it can be prevented, a greater percentage correctly stated that early screening and early management can prevent cervical cancer n=45(20.0%).

This affirms another study by (Getahun et al. 2013) with highest mentioned prevention measure as early screening, n=345(54.8%). Other preventive measure stated were; safe sexual practices n=20(8.8%), proper hygiene n=12(5.3%), receiving HPV vaccine n=10(4.4%), proper treatment of STIs n=5(2.2%), via prayer n=4(1.8%), removing affected breast n=3(1.3%) and avoiding smoking/alcohol n=2(0.9%). Only n=8(3.5%) knew that women should screen at least 3 times in a lifetime from age 30, others thought women should screen monthly n=35(15.5%), every two years n=36(15.9%), yearly n=52(23.0%) and a majority n=91(40.2%) did not how many times cervical cancer screening should be done. This is in line with another study by ("Ndlovu_2011), where the least number of participants n=2 (2.9%) correctly said that women should screen at least 3 times in a lifetime from age 30. This demonstrates that there is inadequacy in the information women have on cervical cancer.

Despite a greater percentage n=80(35.4%) of participants perceiving themselves at risk of cervical cancer, a very low percentage (7.5%) n=17, had ever been screened in their lifetime and a larger percentage of n=209(92.5%) had never screened in their lifetime. Research conducted in other countries have shown similar results, in most cases women thought one needs to go for a test as a result of a recommendation by a health professional. (Ndlovu_2011) re-iterates that, in reality, women in developing countries usually attend health care for cervical smear when the disease is symptomatic and progressed to advanced stages. Another study had similar results, where only n=10(4.8%) out of 208 participants had ever screened for cervical cancer in their lifetime (Halle-Ekane et al. 2018). Majority of the participants n=128(61.2%) reported not being informed as a major reason for not screening previously, and the least n=7(3.3%) said they cannot have such a demonic disease. This conflicts with the study of (Halle-Ekane et al. 2018) where majority of participants 150(72.1%) reported cost as a barrier with the thought that Pap smear screening was expensive. This result is in line with the study by (Donatus et al. 2019) where majority of the respondents 25.30% (n=64) responded that they were not informed as reasons for not screening.

Intentions for future screening were established and more than half n=142(62.8%) were willing to screen, while n=65(28.8%) said they don't know if they will screen in the future and n=19(8.4) reported unwillingness to screen in the future. The study by (Ndlovu,2011) had similar results with n=64(93%) participants who reported willingness to screen in the future.

The women who expressed unwillingness to screen in the future (n=19) gave several reasons, a majority n=15(79.0%) said they don't think they can have such a disease, others said they can't afford the screening n=2(10.5%), n =1(5.3%) thinks the disease is not very dangerous and n=1(5.3%) expressed shyness to expose private part. This is in line with a study by (Emmanuel, Oluwafolahan, and Sinat 2016) with majority of respondent n=25(29.1%) also saying that they cannot have such disease. This contrast the study by (Aniebue and Aniebue 2010) with majority (31.7%) participants giving reason for unwillingness to screen as not having symptoms. According to the health belief model, women are most likely not to undertake a service such as screening if they don't see themselves as vulnerable, or see the benefits of doing the screening, or the benefits associated with doing the screening, or perceive potential barriers such as cost. This explains why some women are unwilling to undertake screening services for cervical cancer.

Factors Influencing Uptake

Above half of the sample n=80(35.4%) perceived themselves at risk of cervical cancer while n=66(29.2%) did not. Others expressed ignorance (don't know if they are at risk or not) n 80(35.4%). This is in line with a study by (Sudenga et al. 2013) who also reported that most women n=254 (65%) felt they were at risk for cervical cancer. This high perception of susceptibility was not associated with increased screening. This could be due to some modifying factors. Modifying factors: these are variables that change or improve likelihood of action. They include demographic variables, location of health facility, mass media etc. They affect perception of threat; increased knowledge will result in correct perception of threat based on scientific knowledge of cervical cancer (Ndikom and Ofi 2012).

In a way to assess perceived severity about cervical cancer, majority agreed to the fact that cervical cancer is a killer if not detected early n=156(69.0%), while n=63(27.9%) did not know and n=7(3.1%) said it's not a killer. More than half of respondents n=164(72.6%) agreed that early screening can help identify precancers which can easily be treated at the early stage (perceived benefits), while n=2(0.9%) thought otherwise and n=60(26.5%) expressed ignorance. The study by (Ifemelumma et al. 2019) also reported similar results with n=288(74.2%) confirming that if cervical changes are found early are they curable. All these were not associated with increased screening, thus explaining the effect of modifying factors on uptake of screening services as explained in the health belief model.

Conclusion

This study revealed that there is limited information about cervical cancer, risk factors and cervical screening among this population. In line with the health belief model, the study has shown that the women were not really aware of cervical cancer nor understood their susceptibility to the disease thus they were not motivated to utilize cervical screening services. Since the women were not well informed and the screening facility

was not readily available and other barriers identified, it is not surprising that these women were not able to utilize cervical cancer screening services. The study reveals that the level of awareness of the risk factors and symptoms of cervical cancer in Bonaberi Health area is low. Consequently, there is need to lay more emphasis on educating and creating awareness among communities about cervical cancer, risk factors, signs and symptoms in all the Health Areas of the Bonaberi Health District. The study also reveal barriers to cervical cancer screening such as lack of information on cervical cancer screening services, inaccessibility of health facilities, costs of the screening service, individual perceptions such as having no signs and symptoms of the disease, fear of the painful procedure, dread to expose private parts and fear of being detected of having cervical cancer after the test. Eliminating cervical cancer contributes to several SDGs and targets SDG 1: No poverty. SDG 3: Good health and well-being. SDG 3.4: By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being. SDG 3.7: By 2030, ensure universal access to sexual and reproductive health care services, including for family planning. Thus, primary and secondary prevention via vaccination, early detection and treatment respectively are essential means to achieving the elimination goal.

Recommendations

WHO's Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020 identifies HPV vaccination and cervical cancer screening and treatment as best buys. As a means to achieving these, health education is identified as an essential tool, where a combination of planned learning opportunities aimed at helping individuals and communities improve, maintain and facilitate their own health by improving their knowledge and influencing their behavior. Adequate health information help people make informed choices about their own health. It gives people the power and confidence to engage as partners with their health service.

Health education should be done in such a way that aligns with the methods of approaches in health education which are; the regulatory approach (enforcement of laws regarding cervical cancer), the service approach (make sure the services preached are made available and accessible), the educational approach (communication, motivation and decision making). As a means to attaining a favorable outcome from health education, it is important that health education places emphasis on the principles that build health education such as; participation (encouraging active participation of community members), reinforcement (sometimes called 'booster dose' such as pamphlets), good human relation, to name a few.

Information pamphlets or posters should be user friendly i.e. translated to the local language and also distributed to the female population as widely as possible. The health managers should review packaging of information so as to simplify complex terminology when necessary to enhance understanding by all women. The use of audio-visual aids presented in the local language (for example video clips in

clinic/hospital waiting rooms) should be reinforced. Cervical cancer and screening messages should form part of the basic health education package offered to all women, irrespective of their health status. Mini surveys should also be periodically conducted to elicit the level of understanding on cervical cancer and the importance of screening. Information obtained would then assist health professionals to further improve the screening services. Health educational initiatives should also target men since studies suggest that male partners could play a vital role in increasing the awareness of this service.

This study recommends that health care providers and health educators target aspects of perceived susceptibility among their patients, including knowledge levels and personal risk assessment. Continued support and advertisement of cervical cancer screening programs will increase usage density and decrease unnecessary deaths from cervical cancer in. Also, Single Visit Approach with VIA and treatment have proven effective in low resource settings thus can be employed as an elimination strategy.

Limitations

The main limitation in this study was the reluctant nature of some women to participate and some, refusal to answer the questionnaires.

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