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Perceptions and Attitude of women of Luderitz, Namibia on Pap smear

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Abstract

Background: Cervical cancer is one of the leading malignancies globally and has taken third place in Namibia amongst women aged 15 - 44 years. Infection with the Human Immunodeficiency Virus (HIV) has been proven to increase women's susceptibility to developing cervical carcinoma. Sadly, Namibia carries a twin burden of HIV and cervical cancer. Namibians are aware of HIV/AIDS, but remain poorly informed about cervical cancer. Furthermore, among those who are aware of the disease, low utilisation of screening tests have been reported.

Objective: The purpose was to explore perceptions and attitudes held by women about cervical cancer, reasons for low uptake of Pap smear testing amongst those who are aware of the malignancy as well as unearth motivation factors that has fuelled women to go for screening.

Methodology: A descriptive, cross-sectional study was conducted using convenience sampling as a sampling technique. The survey instrument used was a self-administered questionnaire. It consisted of both closed and open ended questions. A total of 136 women were surveyed.

Results and conclusion: The level of awareness for cervical cancer (92.6%) and Pap smear (93.4%) were high. Most were able to identify that pap smear test is used for screening for pre-cancerous lesions. However, knowledge about the impact of a HIV positive status along with co infection with HPV as the leading causes for progression of invasive cervical carcinoma was not well known. Knowledge about the other risk factors such as multiple sexual partners (39.7%), early sex debut (34.9%) and smoking was poorly demonstrated. This suggests that a high awareness level does not necessarily translate into having a good perception or understanding of a disease. A good attitude towards screening was observed although less than half of the study population reported ever having a test done.

Keywords: Attitude, carcinoma, Cervical cancer, Pap smear, Perceptions, women

Introduction

Cervical cancer screening uptake remains low in developing countries because of lack of resources and expertise [1]. In addition, prevalence of cervical cancer in Sub-Saharan Africa, still at high level due to competing health needs as most of these countries still lack services for the prevention, such as early diagnosis and management [2].

The reduction in the prevalence cervical cancer is due national screening programmes in many developed nations, while developing nations lack resources and mainly practice sporadic screening. Cervical cancer is preventable if detected early [3]. The Ministry of Health and Social Services (MoHSS) of Namibia adopted that Papanicolou (Pap) smear be done to sexually active, and HIV infected women aged from 15-49 years.

In addition, the Guidelines for Management of Sexually Transmitted Infections, using the Syndromic Approach advocates that all eligible pregnant women visiting the health facilities be screened as part of medical physical examination [4] and that all postnatal women be screened for cervical cancer six weeks after delivery [5].

Cervical cancer can be prevented by early detection through use of one of the selected methods such as Pap smear, Visible Inspection with Acetic (VIA), Visual Inspection using Lugol's Iodine (VILI) and acid Human Papilloma virus Deoxyribonucleic acid (HPV DNA) testing identified as the most important cervical cancer preventing strategy [6]. However, not all these methods are readily available in sub-Sahara due to challenges of health infrastructures.

Pap smear is a procedure where cells from the cervix are collected and studied under a microscope to detect pre-cancer and cancer cells with the aim to detect early and prevent cervical cancer [7]. About 80% of cervical cancer cases can be managed and reduced through early detection via Pap smear [8]. Pap smear (cytology) test has been used in large population and led to a reduction of cervical cancer incidence and mortality [9]. However, sustaining high-quality cytology-based programmes is impossible in low-resource settings and therefore the most efficient and effective strategy for detecting and treating cervical cancer precursors in low-resource settings remains to screen using either VIA, VILI or HPV DNA testing and then to treat using cryotherapy (freezing) [9]. In addition there is uncertainty of women coming back for Pap smear results [10]. Studies reveal that specificity and sensitivity of VIA and Pap smear are largely comparable [11]. HPV DNA testing has been identified as the most important cervical cancer preventing strategy [6]. VIA and VILI may become an alternative screening

tool as they are simple, easy, rapid to administer and do not need many instructions and highly specialized medical staff, are cost effective and results can be made available immediately [9]. Access to information and knowledge influences health decisions making. Information, knowledge and access to health facilities influence women's decision making for screening for cervical cancer. According the NDHS only 25% of Namibian women aged 15-49 years were screened for cervical 15 cancer in 2013 despite the availability of a national cancer screening programme [12] . Namibia carries a twin burden of cervical cancer and HIV [13]. The prevalence of HIV/AIDS in Luderitz was reported to be 20.9% for the year 2014. This figure was significantly higher than the national average which stood at 16.9% [14]. According to the cancer registry, 39 cervical cancer cases have been reported in the! Karas region between 2010 and 2016. For a highly preventable, non-communicable disease, these figures are worrisome. HIV/AIDS is known to increase women's susceptibility to cervical cancer [15]. The rise in HIV/AIDS incidence may lead to an increased number of cervical cancer cases the town of Luderitz. This study has been conducted to assess the perceptions, knowledge and attitudes of women undergoing cervical cancer screening in Luderitz, Namibia.

Study design

This was a non-probability sampling method (Convenience Sampling) descriptive, cross-sectional, quantitative study to assess knowledge, perceptions and attitudes to determine their frequency. A questionnaire consisted of both closed and open ended questions to gain a deeper understanding into the targeted population's attitudes and perceived beliefs of the disease was distributed to participants. Reliability test was done to examine whether the questions were interpreted amongst the women in a similar fashion to allow changes to be made if such disparities were noted. It was found that the questions were all understood similarly and no misinterpretations were observed during this phase, therefore making it reliable enough in its ability to elicit the right responses.

Sample size

$$n = (Z\alpha/2)^2 P (1-P)/d^2$$

Z= 95% confidence interval (1.96)

d = Marginal error =8%

n = sample size

P=estimated proportion 66%

Z $\alpha/2$ =Critical value [16]

For survey type researches, the above formula is used to estimate sample size. According to a Namibian study, the awareness of cervical cancer was 66%. This study therefore used p=66%,

an error margin of 8% with a confidence interval of 95% to calculate the sample size. The sample size calculated was $158.466 \approx 159$. A non-response rate of 30% was factored in, making the adjusted sample size 207. Due to time constraints, incomplete and unreturned questionnaires from the targeted participants, a total of 136 completely filled questionnaires were used in the study.

Ethical considerations

Ethical clearance was sought from the University of Science and Technology (NUST) as well as the Ministry of Health and Social services to conduct the study (Ethical clearance number LH 2019). Thereafter, individuals were approached and allowed to participate in the study based on their own free will and anonymity and confidentiality were observed. All methods were performed in accordance with the relevant guidelines and regulations.

RESULTS

Descriptive statistics

Table 1: Sociodemographic variables of participants n=136

| | | Frequency | % |
|-------------------|---------------------|------------|--------------|
| Age group | 21-25 | 24 | 17.6 |
| | 26-30 | 28 | 20.6 |
| | 31-35 | 31 | 22.8 |
| | 36-40 | 14 | 10.3 |
| | 41-60 | 39 | 28.7 |
| | Total | 136 | 100.0 |
| Religion | Christian | 133 | 97.8 |
| | Muslim | 0 | 0.0 |
| | Traditionalist | 0 | 0.0 |
| | No religion | 3 | 2.2 |
| | Total | 136 | 100.0 |
| Education level | No formal education | | |
| | Primary education | 1 | 0.7 |
| | Junior secondary | 8 | 5.9 |
| | Senior secondary | 40 | 29.4 |
| | Tertiary education | 48 | 35.3 |
| Employment status | Employed | 39 | 28.7 |
| | Unemployed | 119 | 87.5 |
| | Self employed | 13 | 9.6 |
| | Retired | 4 | 2.9 |
| Marital status | Retired | 0 | 0.0 |
| | Single | 98 | 72.1 |
| | Married | 34 | 25.0 |
| | Divorced | 1 | 0.7 |
| | Widowed | 2 | 1.5 |
| | Engaged | 1 | 0.7 |

| | | | |
|--------------------|---|-----|------|
| Number of children | 0 | 732 | 23.5 |
| | 1 | 32 | 23.5 |
| | 2 | 37 | 27.2 |
| | 3 | 26 | 19.1 |
| | 4 | 5 | 3.7 |
| | 5 | 2 | 1.5 |
| | 6 | 1 | 0.7 |
| | 7 | 1 | 0.7 |

A total of 136 women volunteered were selected to be part of the study. The majority (28.7%) of them fell within the age group of 41-60 years, with Christianity (97.8%) being the predominant religion (Table 1). Close to a third of the sample, n=48 (35.3%) had senior secondary education, while junior and tertiary education stood at 29.4% and 28.7% respectively. Only one individual reported having no formal education (0.7%). Most of the women were single n=98 (72.1%), while n=34 (25%) are married. Most of the women reported having two children n=37 (27.2%), while only n=4 (2.9%), reported five or more births. Majority were employed, n= 119 (87.5%), with those being unemployed making up (13) 9.6% of the participants.

Table 2: Residential areas of respondents

| Residential area* | Frequency | % |
|-------------------|-----------|------|
| Agate park | 24 | 19% |
| Amilema | 6 | 5% |
| Area seven | 20 | 16% |
| Area two | 9 | 7% |
| Benguela | 16 | 13% |
| Burenkamp | 5 | 4% |
| Jakkalsdraai | 7 | 6% |
| Nautilus | 20 | 16% |
| New location | 5 | 4% |
| Spokiesdorp | 3 | 2% |
| Town | 12 | 9% |
| Total | 127 | 100% |

Table 2 shows that most of the respondents reside in suburban areas n=101(83%) with a smaller scale residing in informal settlements namely Amilema n=6(4%) and Area seven n=20(13%).

Table 3: Proportion of women of Luderitz who have heard about Pap smear by Age group

| |
|--|
| Number of participants who heard about Pap smear by Age group |
|--|

| Age group | Heard about pap smear | | Total number of participants | Proportion in % |
|--------------------|-----------------------|------------|------------------------------|-----------------|
| | No | Yes | | |
| 21- 25 | 1 | 23 | 24 | 96% |
| 26- 30 | 3 | 25 | 28 | 89% |
| 31-35 | 5 | 26 | 31 | 84% |
| 36 -40 | | 14 | 14 | 100% |
| 41- 60 | | 39 | 39 | 100% |
| Grand Total | 9 | 127 | 136 | 93.4 |

According to Tables 3 all women aged '36- 60' have heard of cervical cancer and Pap smear. Although only 81% of women in the age group '31-35' said they have heard about cervical cancer, 84% stated that they have heard about Pap smear testing. This gives a picture that there are some women who are aware of Pap smear testing but not aware of cervical cancer. Out of 24 women aged '21-25', n=23 (96%) of them stated that they have heard of Cervical cancer and Pap smear.

Perception of Cervical cancer, risk factors and prevention methods

Table 4: Perception of Cervical cancer, Pap smear, risk factors, and prevention amongst women

| Variables | Responses | Frequency | % |
|---|-------------------------------------|------------|---------------|
| Use of Pap smear (multiple responses) | To treat sexual transmitted disease | 6 | 4.7% |
| | To screen for cervical cancer | 111 | 87.4% |
| | Cleaning of the womb | 9 | 7.1% |
| | Removal of womb | 3 | 2.4% |
| | To screen for infertility | 6 | 4.7% |
| | Don't know | 4 | 3.1% |
| | Other use* | 1 | 0.8% |
| Total | | 127 | 100.0% |
| Risk factors (multiple responses) | Single response | 45 | 35.7% |
| | Two responses | 109 | 86.5% |
| | One of the correct responses | 59 | 46.8% |
| | Two correct responses | 10 | 7.9% |
| Do you think you are at risk | Yes | 72 | 52.9% |
| | No | 54 | 39.7% |
| | Don't know | 10 | 7.4% |
| Prevention methods (multiple responses) | Avoiding multiple sexual partners | 61 | 48.4% |
| | Avoiding early sex debut | 32 | 25.4% |
| | Quit smoking | 33 | 26.2% |
| | Regular screening | 94 | 74.6% |
| | HPV vaccination | 21 | 16.7% |
| | Non oral contraceptive | 5 | 4.0% |

| | | | |
|--|----------------------------|------------|---------------|
| | Other prevention methods** | 7 | 5.6% |
| Treatment available for cervical cancer | Yes | 107 | 84.9% |
| | No | 14 | 11.1% |
| | Don't know | 5 | 4.0% |
| Total | | 126 | 100.0% |
| *Other use included Bladder cancer (0.8%) | | | |
| ** Others included Don't use soap (1.6%), Use protection during intercourse (2.4%), using clean toilets (1.6%) | | | |

A large portion of women stated having heard of cervical cancer (92.6%) and Pap smear test (93.4%) (Table 4). However, when asked what the pap smear test is used for, a variety of responses were chosen. Most agreed that it's to screen for cervical cancer n=111 (87.4%). Other responses were; treating sexual transmitted disease n=6 (4.7%), screening for infertility n=6 (4.7%), womb cleaning n=9 (7.1%) and bladder cancer n=1 (0.8%) (Table 4).

Participants were asked to state two factors that carry the greatest risk for cervical cancer development. About one third gave a single response only n=45 (35.7%). Those who gave sufficient responses (two answers) comprised of 109 women (86.5%). Those who mentioned one of the two correct responses consisted of 59 women (46.8%). Only n=10 (7.9%) participants correctly identified that having a weak immune system caused by HIV along with being infected with HPV are the highest risk factors toward cervical cancer development (Table 4). The risk factors frequently stated were; having multiple sexual partners n= 50 (39.7%), early sexual debut n=44 (34.9%), smoking n=22 (17.5%) and long term oral contraceptive use n=20 (15.9%). Other risk factors included alcohol use (0.8%), dirty toilets (1.6%), lack of regular screening (0.8%), Microwaved food (0.8%), Soap (1.6%), Spicy food (0.8%), Unprotected sex (0.8%), Genetics (0.8%), High blood pressure (0.8%), Lotions (0.8%), Plastics (0.8%). Irregular menstruation (0.8%), was reported as a risk factor, when in fact, it's a symptom of cervical carcinoma.

When asked about whether they thought they are at risk of developing cervical cancer. Over half indicated that they were at risk of developing cervical cancer n=72 (52.9%), while n=54 (39.7%) did not think they were. Others stated that they did not know whether they were at risk n=10 (7.4%) (Table 4).

About three quarters of the sample n=94 (74.6%) stated regular screening as a preventive measure. Close to half n=61 (48.4%) stated that cancer of the cervix can be prevented through avoiding multiple sexual partners, avoiding early sex debut n= 32 (25.4%) and quitting smoking n=33 (26.2%). Only n=21 (16.7%) stated HPV vaccination. A smaller proportion stated not using soap to wash the vagina (1.6%) and making use of clean toilets (1.6%) as measures to prevent cervical carcinoma (Table 4). No one was able to mention all the preventive measures for cervical cancer.

A greater proportion reported that cervical carcinoma can be treated n= 107 (84.9%), n=14 (11.1%) said there was no treatment and n=5 (4.0%) did not know whether treatment was available (Table 4).

Table 5: Pap smear screening uptake amongst participants according to Age group n=63

| Screening count by Age group | | | |
|------------------------------|-----------|------------------------------|-------------|
| Age group | Frequency | Total number of participants | % |
| 21- 25 | 6 | 24 | 25% |
| 26- 30 | 10 | 28 | 36% |
| 31-35 | 12 | 31 | 39% |
| 36 -40 | 10 | 14 | 71% |
| 41- 60 | 25 | 39 | 64% |
| Grand Total | 63 | 136 | 100% |

Table 5 indicate that among the total participants who took part in the study n=136, less than half were screened n=63 (46.3%), majority of which were women between the ages of 36-40 (71%), followed by age group 41- 60. Amongst the n= 24 women aged 21-25, only 6 went for screening (25%).

According to table 5 illustrated below, their reasons for screening was mostly due to doctor recommendation (29%), wanting to be informed about their health status/wellbeing (24%) and knowing someone who previously got screened (21%). Others got screened as part of antenatal (2%), and post-natal procedures (3%). Some women stated that they had worrying symptoms which led to them going for screening (13%).

Table 6: Motivation, frequency for screening amongst women n=63

| Motivations for screening | Frequency | % |
|---------------------------|-----------|---|
|---------------------------|-----------|---|

| | | | |
|---|---|-----|-----|
| What motivated you to get screened? (multiple response applicable) | doctor recommendation | 18 | 29% |
| | Had worrying symptoms | 8 | 13% |
| | know of someone who got screened | 13 | 21% |
| | Antenatal screen | 1 | 2% |
| | awareness of dangers of cervical cancer | 1 | 2% |
| | Colleague recommended | 1 | 2% |
| | Fibroids | 1 | 2% |
| | For prevention purpose | 1 | 2% |
| | postnatal testing | 2 | 3% |
| | Relative recommended | 1 | 2% |
| Routine testing | 2 | 3% | |
| To be informed about health/well-being | 15 | 24% | |
| How many times | Once | 23 | 38% |
| | Twice | 12 | 20% |
| | more than two times | 28 | 46% |
| How did you find out about pap smear test?* | Pamphlets | 10 | 16% |
| | Relative/friend | 11 | 18% |
| | Healthcare worker | 22 | 36% |
| | Cancer association | 5 | 8% |
| | Awareness Campaigns | 4 | 7% |
| | Posters | 6 | 10% |
| | Radio | 2 | 3% |
| School | 1 | 2% | |

According to Table 6, most women have gone for screening on more than two occasions n= 28 (46.3%). When asked where they got their information from about the test, majority stated that they were informed by their healthcare workers n=22 (36%), followed by relative/friends n=11 (18%). Others stated Pamphlets n= 10 (16%), Posters n=6 (10%). Only n=1 (2%) stated school being their source of information.

Attitudes amongst women who are aware of cervical cancer and Pap smear testing

Table 7: Attitudes toward cervical cancer and screening amongst participants who are aware of cervical cancer n= 125

| | | Frequency | % |
|---|----------------------------|-----------|-----|
| If screening is free will you screen?* | Strongly disagree | 0 | 0% |
| | Disagree | 0 | 0% |
| | Neither agree nor disagree | 14 | 11% |
| | Agree | 27 | 22% |
| | Strongly agree | 84 | 67% |
| Do you think cervical cancer is a serious disease?* | Strongly disagree | 0 | 0% |
| | Disagree | 0 | 0% |
| | Neither agree nor disagree | 5 | 4% |

| | | | |
|---|-----------------------------------|----|-----|
| | Agree | 25 | 20% |
| | Strongly agree | 95 | 76% |
| Do you think you will go for screening in the future?* | Strongly disagree | 0 | 0% |
| | Disagree | 0 | 0% |
| | neither agree nor disagree | 6 | 5% |
| | Agree | 28 | 22% |
| | Strongly agree | 91 | 73% |

*One missing value

According to Table 7, majority n=84 (67%) of the respondents strongly agreed if screening is for free, they will screen. Again, majority strongly agreed that cervical cancer is a serious disease n=95 (76%). And lastly, a greater portion strongly agreed that that they would screen in the near future. Conversely, n=6 (5%) neither agreed nor disagreed when asked about screening in the future.

Factors associated with Pap smear uptake

Sociodemographic variables associated with screening uptake

Table 8: Correlation between the explanatory variables (independent variables) and response variable (independent variable “Screened for cervical cancer”)

| Pearson’s Correlations Coefficient | | have screened for cervical cancer |
|---|---------------------|--|
| Age group | Pearson Correlation | .305** |
| | Sig. (2-tailed) | 0.000 |
| Employment status | Pearson Correlation | -0.092 |
| | Sig. (2-tailed) | 0.284 |
| Religion of respondent | Pearson Correlation | 0.061 |
| | Sig. (2-tailed) | 0.479 |
| level of education | Pearson Correlation | -0.075 |
| | Sig. (2-tailed) | 0.384 |
| Marital status | Pearson Correlation | .176* |
| | Sig. (2-tailed) | 0.040 |
| Number of children born by a mother | Pearson Correlation | 0.074 |
| | Sig. (2-tailed) | 0.389 |
| Have screened for cervical cancer | Pearson Correlation | 1 |
| | Sig. (2-tailed) | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | |

From Table 8 above, the Pearson's Correlations value for age group is $r = 0.305$ and $p = 0.000$ showing that there is a weak positive association between going for cervical screening and the age group of an individual. This means the older the person, the higher the likelihood to have cervical screening and there is enough evidence to suggest this association as the null hypothesis is rejected because the p – value is less than our selected significance level ($\alpha = 0.05$).

A very weak negative relationship ($r = -0.092$) was found between having gone for screening and employment status. There was not enough evidence to suggest this association since our p value (0.284) is above our selected significance level ($\alpha = 0.05$).

Moreover, a weak positive significance relationship was found between having gone for screening and marital status ($r = 0.1796$). The p -value suggests a significant statistical difference $p = 0.040$.

Religion of respondent and number of children born by a mother was found to have a weak positive relationship as well, although this was not significant to say at 95% confidence interval.

And finally, results revealed a negative relationship between having cervical screening and level of education ($r = -0.075$ and $p = 0.384$). This means the more someone is educated (people with tertiary education) the less likely that person to go for testing but there was not enough evidence to suggest this.

Logistic regression model

Logistic regression model was used. During modelling, a list of several models was performed by adding and removing variables like age group, marital status, employment status, Religion, level of education and total number of children born by a mother.

Among the list of performed models, the best model was selected using the Akaike Information Criterion (AIC) and Bayesian Information Criterion BIC, where the AIC and BIC of each model were compared and the model with small value of AIC and BIC. During the process of selecting the best model, not only was the AIC and BIC checked, but the deviance values and

the significance test of the overall model was selected. Generally AIC and BIC is calculated as follows:

$$AIC = -2 * \ln L + 2 * k$$

$$(BIC = 2 * \ln L + 2 * \ln N * k$$

where L is the value of the likelihood, N is the number of recorded measurements, and k is the number of estimated parameters.

The final best model could only include variables that are, age group and level of education. Other variables like marital status, employment status, religion and total number of children born by a mother were included in the other models performed, but the overall model was not significant. In some cases the maximum likelihood could not be computed and big AIC, BIC and deviance values were generated, which this tells that the model is not good hence, the best final model ended up having only two variables.

Discussion

Awareness of cervical cancer, Pap smear purpose and screening uptake

In this study a high level of cervical cancer and Pap smear awareness was recorded across all age groups, with the highest amongst women between the ages 36-60. Considering that this is the age range that carries the highest risk for the development of invasive cervical carcinoma [17], it is good that most knew about the disease. This high awareness level was perhaps attributed to the fact that majority of the women had secondary or higher education. Age group and marital status were the only socio demographic variables that were significantly associated with uptake of pap smear screening ($p= 0.000$, $p =0.040$ respectively). Despite the fact that a high awareness was reported with tertiary educated women, screening uptake was not positively associated with this group. These findings are in line with a study conducted in Nigeria [18]. Additionally, more people were aware of the fact that the pap smear test is designed for screening of cervical cancer.

Despite more than half perceiving themselves at risk, only (46.3%) had ever been screened. Others (7.4%) were not certain whether they were at risk. Not knowing whether you are at risk could cause women not to go for screening. Although screening practices stood at 46.3%, this was higher compared to a study done in Kwazulu-natal, South Africa (18%). This huge

difference could be attributed to the fact that the South African study was conducted in the rural parts of Kwazulu- natal. [19]

Screening frequency and source of information

Close to half of the women who have had a pap smear test done, reported going on more than two occasions. Research shows that women in developing countries who have cervical cancer are often the ones who never went for screening or only screened once in their lifetime.

Approximately, 36% stated that they were informed by their healthcare workers, followed by relative/friends 18%. Others stated Pamphlets (16%), Posters (10%). Only 2% stated school being their source of information. However, a study conducted in Ghana revealed school to be the main source of information (37%)[20]. The study was conducted amongst health professionals with tertiary education, which explains why most might have heard about cervical cancer in school. It is important that women become more health literate from a young age and this can be achieved if cervical cancer and other gynaecological diseases are taught in lower education levels.

The motivations behind screening were mostly done due to recommendation from their health care professionals. This eludes to the fact that women might be of the belief that only through doctor's recommendation may they go for screening. Other women were motivated to get screened because they knew someone who previously went for screening. This shows that women's experiences may influence the choice to screen in others. A small proportion were motivated to go for screening as they believed that they might have fibroids. This points to misinformation about the use of pap smear testing.

The predominant reasons for not screening was that they had not decided on when to go, fear of pain from the procedure, having no time to visit the clinic and no recommendation from a doctor to do so. Similarly, in [21], large number of women in the study were employed, which may explain why some stated that they did not have time to go and visit the doctor. Women who are bread winners in their household may therefore prioritise their work over their health. A study in Malaysia also found that doctor recommendation influenced screening uptake amongst women [22]. Attention need to be shifted in this area to better equip women to understand the importance of making their health a priority and need to make use of basic services to increase pap smear testing.

Perception on risk factors and prevention

Results revealed that most of the women have a poor perception on what is mostly causing women to suffer from invasive cervical cancer. Only 10% of the women indicated having a weak Immune system caused by HIV, along with co infection with HPV carries the highest risk for cervical cancer. It is well documented that progression from low grade lesions to invasive cervical carcinoma is faster amongst HIV positive women. This was due to HPV infection persisting for longer durations in this group [23] It is important that women are educated on HPV and its spread, because it is the causal agent behind majority of the cervical cancer cases.

Other risk factors such as having multiple sexual partners (39.7%), early sexual debut (34.9%), smoking (17.5%), and long term oral contraceptive use (15.9%) were mentioned, however it was also poorly reported. Some believed that high blood pressure, irregular menstruation, genetics and microwaved food caused cervical cancer. There is a need to clear up these misconceptions as to what causes cervical carcinoma, as this indicates that the population at large may share in these beliefs.

Attitude towards cervical cancer and its screening method

Overall, the participants displayed a positive attitude towards screening, with 73% strongly agreeing to screen in the future. Approximately 73% strongly agreed that cervical cancer is a serious disease, with only 4% neither agreeing nor disagreeing. A positive attitude towards screening may translate into women being more open to the idea of getting tested in the future.

Conclusion

The results show that women go for screening for various reasons that does not include screening for cervical cancer. Healthcare workers should therefore offer consultations beforehand to find out the reason for women going for pap smear screening and clear up any misconceptions held about the purpose of a pap smear test.

A positive attitude was noted amongst participants even though screening practice was low. The results also suggested women come to rely heavily on their health care professionals to recommend screening tests for them. Health care workers must therefore educate women more on their basic health and make cervical cancer screening discussions a part of consultations. Also, very few women knew about HPV vaccination. More talks need to be held on this front along with vaccinations to be given to young girls in an effort to reduce cervical cancer incidence later on in life.

It is encouraged that media coverage be improved by using various outlets such as television, social media platforms and radio. Many people have access to radios and television, so this can help to create community awareness. In addition to this, awareness campaigns should focus on spreading awareness about women's susceptibility and the benefits of regular screening as a low perceived risk can lead to women defaulting on screening.

Bias and limitation

This study employed Convenience sampling method. Although this method is preferred due to the low cost and time associated with it, it is difficult to generalize the results of the survey to the population it is a non-probability sampling technique. The aim was to enrol 152 women in this study, but due to time constraints and willingness of participants only 136 women took part. With surveys, social desirability bias may be introduced.

Declarations

Ethics approval and consent to participate

Informed consent was obtained from all participants. Ethical clearance has been obtained from the University of Science and Technology (NUST) and the Ministry of Health and Social Services (clearance number LH 2019). The authors declared compliance with all ethical standards.

Consent for publication

The Authors give Consent for publication.

Availability of data and materials

All data generated or analysed during this study are included in this published article.

Competing interests

The authors declare no conflict of interest.

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Authors' contributions

Y.G.A supervised, provided oversight, leadership, editorial comments, and technical input.

Y.G.A, L.H & K.K designed the study, developed the methodology.

L.H. conducted the research.

All authors contributed to the manuscript development.

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