

Women's Knowledge, Attitude and Practice Regarding Cervical Cancer Screening in Mbeya Region-Tanzania

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Abstract:

Background: Cervical cancer is the leading cause of mortality among gynecologic malignancies globally. Sub Saharan Africa (SSA) region carries the greatest burden in global mortality. Cervical cancer: Screening (CCS) is done by several techniques to help in early detection of cervical cancer. However, the uptake in most SSA countries including Tanzania remains low. Objectives: Assess knowledge, attitude and practice of Mbeya region women regarding cervical cancer screening. Settings: The study was conducted in seven selected health facilities representing Mbeya region. Subjects: A convenience sample of 420 women attending the previously mentioned setting was enrolled (60 women from each hospital). Tools: Four tools were developed and used by researcher, to collect data: Tool one: Socio-demographic characteristics and clinical data structured interview schedule. Tool Two: Women's knowledge about cervical cancer structured interview. Tool three: Assessment of attitude regarding cervical cancer screening. Tool Four: cervical cancer screening practice interview questionnaire. Results: The study results revealed that more than two fifths of study participants had satisfactory knowledge while more than half (57.10%) of them had unsatisfactory. In relation to attitude, more than half (59.80%) of study participants had positive attitude, two fifths (40%) of them had neutral attitude while only 0.20% of them had negative attitude. Furthermore, two thirds (66.20%) of study participants did screening for cancer of cervix while more than one thirds (33.80%) of them didn't do it. Conclusion: Less than half of the study participants had unsatisfactory knowledge. Recommendations: Increase awareness through mass media and dissemination of health knowledge through posters, photos, and booklets as educational campaigns directed to the women with no symptoms at reproductive age.

Key words: Knowledge, Attitude, Practice, Cervical Cancer, Screening

Introduction

Cervical cancer is gynecological malignancy and is among the leading causes of morbidity and mortality among women globally (Tekle et al., 2020). It is the fourth most common malignancy among females globally after breast, colon, and lung cancers (Sung et al., 2021; Torre et al., 2017). In today's world, cervical cancer is primarily a disease in low income countries. Most women with cervical cancer in these countries present with advanced disease resulting in low cure rates (Siegel et al., 2022).

Cervical cancer is mainly caused by long standing infection of human papilloma

virus (HPV) (Small et al., 2017). The presence of HPV is documented to be detected in 99.7% of reported cervical cancers cases. The most common histologic types of cervical cancer are squamous cell and adenocarcinoma with 70% and 25% of all cervical cancer types respectively (Frumovitz, 2021).

It was estimated in year 2020 alone, 604,237 women were diagnosed with cervical cancer globally, representing 6.5% of all female cancers. Most deaths caused by cervical cancer (90%) are in lower and middle income countries (Sung et al., 2021). (WHO 2022).

The challenge of cervical cancer is even higher and critical in Sub-Saharan Africa (SSA). Countries in SSA have more cases among 36 mentioned countries with most cervical cancer cases (Sung et al., 2021): <https://togetherforhealth.org/>. The region carries the greatest burden, with 24.55% of the global mortality from cervical cancer (Ngcobo et al., 2021).

Regardless of the harm caused by cervical cancer, still these deaths can be prevented. There are several methods used in prevention of cervical cancer deaths. These methods are divided into primary, secondary and tertiary prevention. Therefore mentioned methods include increase in mass education on cervical cancer, vaccinations against HPV with successive pre-cancerous treatment and treatment of proven cancer. (Sundström et al., 2020)

The challenge toward reduction of deaths due to cervical cancer in most Sub-Saharan African countries is critical. These challenges constitute of financial, logistical, and sociocultural factors differences. These differences affect both access to the services and availability of pre-cancerous treatment when the centers are available. The other challenge is hesitancy toward vaccination. (Black E, & Richmond R 2018)

In Tanzania, 42, 060 new cancer cases were reported in 2018 alone with a total of 28, 610 cancer deaths recorded in the same year (Sung et al., 2021). Health seeking behavior among East African communities is heterogeneous and according to O'Meara is entirely dependent on both cognitive and non-cognitive factors. It is likely that lack of knowledge among rural communities on the existence of cancer and its preventive measures as well as poor health care seeking behavior contributes a lot to the increasing cases of cancer in many parts of African Countries (O'Meara et al., 2014).

Having known the above stated facts on the difference of challenges between it is therefore important that to conduct a study that will enlighten local factors affecting performance regarding cervical cancer screening in SSA. On that basis this study

was conducted in Mbeya Region, southern highlands of Tanzania.

In Tanzania Cervical cancer has been reported as a leading cause of cancer related deaths among women despite being most preventable one. In 2018, 42,060 new cancer cases were reported with a total of 28,610 cancer deaths recorded in the same year in Tanzania (Sung et al., 2021).

Health seeking behavior among East African communities has been reported to be heterogeneous, due to socioeconomic inequities in health among African communities (Schellenberg et al., 2003). This scenario hypothesizes that cervical cancer knowledge, perceptions and healthcare seeking behavior among women in is a key issue in Tanzania. Furthermore, the role of the local healthcare facilities in handling cases of cervical cancer among patients is not known. (O'Meara et al., 2014).

Although cervical cancer is curable, unfortunately, in most African countries about 80% of patients are diagnosed with the disease when it is at its advanced stages (Dunyo et al., 2018; Zeleke et al., 2021).

Considering prevalence risk factors of cervical cancer in Mbeya, it's important to understand the knowledge, attitudes towards cervical cancer screening and performance on cervical cancer screening among women in communities of Mbeya, Tanzania.

The aim of the study is to:

Assess women's knowledge, attitude, and practice regarding cervical cancer screening in Mbeya region-Tanzania

Research question:

What are the women's knowledge, attitude, and practice regarding cervical cancer screening in Mbeya region-Tanzania?

Materials and Method

Materials:

Research design:

A descriptive exploratory research design was followed in this study.

Setting:

The study was carried out in seven health facilities representing Mbeya region where it is divided into seven districts.

Subjects:

A convenience sample of 420 women attending the previously mentioned setting was enrolled (60 women from each hospital). They were collected according to the following inclusion criteria: age from 20 - 49 years

The sample size of women was estimated by using the Epi-Info program, where the following parameters were applied: Total population of all districts: 557,574, Expected frequency = 50 %, Acceptable error = 5 %, Confidence coefficient = 95 %, Minimum sample size = 384. Maximum sample size = 420.

Tools for data collection:

Four tools were developed and used by researcher, to collect the necessary data as follows

Tool one: Socio-demographic characteristics and clinical data structured interview schedule, which was used to assess women's socio-demographic characteristics, medical history, menstrual history, reproductive history, family planning history, gynecology history and sexual history.

Tool Two: Women's knowledge about cervical cancer structured interview, which comprised 20 questions about definition, vulnerable age, risk factors, signs and symptoms, presence of cervical cancer screening, interval of screening (frequent), presence of protective vaccine, prevention, curability, treatments, investigations and diagnosis. A scoring system was used; knowledge items was pre-determined according to the literature and coded accordingly. Each knowledge item was given a score; correct and complete answer (2), correct but incomplete answer (1), and incorrect answer or do not know (0). The total score was calculated and classified as follows :

- Satisfactory $\geq 50\%$
- Unsatisfactory $\leq 50\%$

Tool three: Assessment of attitude regarding cervical cancer screening, this tool was developed by researcher to explore the attitude of women regarding cervical cancer screening; all responses categories on the attitude item had three points. Likert scale contained a total of 30 statements. It included (15 positive statements and 15 negative statements). Each positive statement was rated as follows: Agree= 3, Neutral attitude = 2 and Disagree attitude =1 while this scoring system was reversed for negative statements, where disagree = (3), Neutral = (2) and agree = (1)

Total score ranged from 30 to 90 and categorized as follows:
- Negative Attitude (from 30 to less than 50)
- Neutral attitude (from 50 to less than 70)
- Positive attitude (from 70 to 90)

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Tool four: Cervical Cancer Screening practice interview questionnaire: This tool was developed by the researcher to collect information about cervical cancer periodic screening practice such as asking about having a periodic screening for cervical cancer, causes of doing or not doing cervical cancer screening and instructions before doing cervical cancer screening

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Methods

This study was carried out according to the following steps:

Approval

An approval from Ethical Research Committee, Faculty of Nursing- Alexandria University, was obtained.

An official letter was directed from the Faculty of Nursing, Alexandria University to the responsible authority of the study setting to take permission to collect data after explaining the purpose of the study.

Development of the tool

- Tools I, II, III, IV was developed by the researcher after revising relevant literature.
- Tools I, II, III, IV was tested for content validity by a jury of 5 experts in the field.
- Tools II, III, IV was tested for its reliability by using internal consistency test (Cronbach's Alpha test) and the results were satisfactory (0.85 & 0.75 & 0.88)

Pilot study

A pilot study was carried out on 42 women (excluded from the study subjects) to test the feasibility of the study as well as to ascertain the clarity and applicability of the tools in addition to calculate the time needed to complete them.

Data collection

Data was collected from women attending ante natal clinic, family planning clinics, postnatal care clinics, and gynecological clinics.

Data was collected over the period of three months started from September to December 2021. Four days per week from 9am to 1:30 pm were specified for data collection.

Statistical analysis

Statistical analysis was done by the researcher after collection of data by using Statistical Package for Social Sciences (SPSS version 20) program. The collected data was categorized, coded, computerized, tabulated and analyzed using frequency distribution tables, percentage, means and standard deviations. Also, Pearson correlation coefficient test was used to compare the significant differences of frequencies for categorical data. The level of significant used is $P \leq 0.05$

Ethical Considerations:

- Written informed consent was obtained from the women prior to data collection and after the purpose of the study was explained.

- The privacy of the study participants was protected.
- The confidentiality of the data collected was always maintained.
- Every woman was informed that her participation in the study is voluntary, and she can withdraw at any time.

Results

Table (1) illustrates the distribution of study participants according to their socio-demographic characteristics. As regards to age, it was observed that more than two fifths (42.86%) of the study participants aged from 20 to 30 years.

In relation to their level of education, the table shows that more than two fifths (41.90%) of the study participants completed primary level of education.

Regarding marital status, it was observed that more than two thirds (67.62%) of the study participants were married, and more than half (52.86%) of the study participants were not working.

Finally, more than half (53.38%) of the participants were urban dwellers and the rest 47.62% were living in the rural area.

Figure (1) displays percent distribution of study participant according to their total score of knowledge about cervical cancer. It was clear that more than two fifths (42.90%) of study participants had satisfactory knowledge while more than half (57.10%) of had unsatisfactory knowledge

Table (2) shows the percent distribution of the study participants according to their total score of attitudes regarding cervical cancer screening. It was observed that more than half (59.80%) of study participants had positive attitude toward cervical cancer screening, on the other hand two fifths (40%) of them had neutral attitude while only 0.20% of the study participants had negative attitude.

Table (3) illustrates the correlation between total score of knowledge score and attitude total score about cervical cancer screening

among women in Mbeya region. It was found that there was a correlation between the client's participant's knowledge and attitude. A significant weak positive association was found between client's total score of knowledge about cervical cancer screening and their total score of attitude toward it. (P=0.011)

Table (4) illustrates the number and percent distribution of the study participants according to their practice of cervical cancer screening. It was noticed that about two thirds (66.20%) of study participants had already done screening for cancer of cervix while more than one thirds (33.80%) of them never did it before with different reasons for not doing it. As, more than two fifths (45.77% & 42.95%) of them said that did not hear about it and they were afraid of the procedure respectively.

Regarding age of performance, it was observed that more than one thirds (33.81%) of study participants, did the screening at age ranged between 35 to 45 years.

Furthermore, when the study participants were asked about the reasons of performing cervical cancer screening, more than two fifths (48.59%) of study participants stated that physician request was the reason for performing it and only 9.49% of study participants did screening for personal interest.

Discussion

Cervical cancer is a major worldwide public health problem. Its incidence places it second to breast cancer among the female neoplasia and fourth among the major types of cancer on a global scale. This type of cancer represents a principal area of action and research within the public health field as a cancer of cervix is a preventable disease and a key aspect of its prevention of its premalignant form by employing a simple examination of the Papanicolaus (pap) smear as secondary prevention (Al-Amro et al., 2020).

The cervical vaginal smear is one of the most efficient screening tests available in the oncology. High prevalence of cervical cancer mortality in women at a productive phase of their lives and disparities across geographical regions reveals both differences in screening program implementations and absence or weakness of community education strategies (health promotion and prevention) that indicate the difficulty of access to public health service for early diagnosis and treatment of precursor lesions (Al-Amro et al., 2020). (Al-Amro et al., 2020; United Republic of Tanzania; National guideline for Cervical Cancer Screening Programme 2019).

Generally, the present study revealed unsatisfactory knowledge about cervical cancer appears among all the study participants. The findings of this study revealed that, more than two fifths of participants didn't know the definition of cervical carcinoma. This is consistent with the study conducted in Dar es salaam which showed fifty three percent of the participants had inadequate knowledge of cervical cancer and CCS (Mboineki et al., 2020).

However, the study in Magu District Tanzania, showed more than four fifths of the women scored less than 50%, this is significantly higher magnitude compared to the study. This can be due to the fact that this study has comprised women from different hospital settings across the entire Mbeya region while the study by Mabelele, had only been conducted in one setting (Mabelele et al., 2018).

Upon investigating the study subjects, attitude toward cervical cancer screening, the results of the present study showed that more than half of participants had positive attitude regarding cervical cancer screening. This study's findings are slightly higher than the study done in Ethiopia where forty five percent of the participant had positive attitude (Tekle et al., 2020).

Furthermore the current finding is relative in harmony with that of Getaneh which concluded that 67.7% had a favourable attitude, towards cervical cancer and its

screening. More interesting, we found that more than half had positive attitude regarding cervical cancer screening even though they had poor knowledge about cervical cancer and its screening (Getaneh et al., 2021).

In general, the uptake of cervical cancer screening is affected to a great extent by the attitude of the health care provider. Several studies documented that nurses play a major role in enlightening the public on the availability and the need for cervical cancer screening services, so that their attitude is often crucial in gaining women's confidence as they are the persons who conduct tests .

More importantly, the attitude and approach of the person performing the test might greatly influence the woman future willingness to attend. If a woman dislikes the persons who will perform the screen, this might prevent her from attending (WHO 2014)

Therefore, it is important to highlight that the assimilation of the practice of screening require first of all an awareness of the test benefits, its efficacy, and importance as well as positive attitude and willing for screening by the teams working specifically to women in basic units (Urasa et al., 2011)

Understanding the level of practice of cervical cancer screening among female will help in creating population specific healthcare programs and interventions aimed at improving women's health. As expected, the current result showed that about two thirds of women who had undergone CCS at least once in their life time, a similar study of Endelevi support that finding where only 8.2% of study participant had done ccs. It is evident that in Mbeya southern highlands of Tanzania screening is higher (Mabelele et al., 2018; Mboineki et al., 2020; Endelevi DA.; et al., 2020)

The higher proportion in this study may be attributed to the sampling design where we randomly selected women in the hospital settings Women feel comfortable to talk about their symptoms with a female health care provider only. With poor health

seeking behaviours, the ones who come to the hospitals are more likely to have a good insight of their health (Heena H. 2021).

The current findings with respect to cervical cancer screening practices, relatively agree with the study of Touch & Oh, in Cambodia, which revealed seven percent of women underwent Pap test (Touch & Oh, 2018).

Although the uptake of cervical cancer screening in Sub-Saharan Africa is reported to be low as twelve percent in several studies analysed from 2000-2019 and in this study is higher (Yimer et al., 2021). Among reasons, the establishment of cervical screening campaigns and the increase of free screening centre contributes to this higher screening rate in southern highlands Tanzania (Yimer et al., 2021).

Conclusion

It can be concluded from the present study results that:

Regarding to women's knowledge about cervical cancer less than half of them had unsatisfactory knowledge. This was more apparent in relation to definition, vulnerable, risk factors and symptoms of cervical cancer. In addition, a sizeable proportion of the study participants had positive attitude regarding screening of cervical cancer and a statistical significant association was found between the total score of the study participant's knowledge and their total score of attitude about cervical cancer screening .

Moreover, a presentable proportion of the study participants didn't perform screening because they did not hear about it, afraid of the procedure and/or do not know whom to consult for undergoing the test

Recommendation:

The following recommendations are suggested:

1. Increase the awareness about cervical cancer screening through mass media and dissemination of health knowledge through posters, photos, and booklets as educational

campaigns directed to the women with no symptoms at reproductive age.

2. Establishing a screening recommendations guideline which should be distributed at all hospitals and health centres.

3. Cervical cancer and its screening should be integrated into the basic education curriculum and training curriculum for nurses.

4. Health teaching programs should be carried out for adolescent girls in the primary and secondary schools, college, universities as well as clubs to fill the gaps of their knowledge about the anatomy and physiology of female reproductive system, health and risky behaviour, harms of early initiation of sexual intercourse and early marriage. The focus on cervical cancer for this age group should be on primary prevention through HPV vaccination.

Recommendations for future researches:

- Identify the determinants of cervical cancer risk factors in Tanzania.
- Assessment of perceived barrier to practice cervical cancer screening among women in Tanzania.
- The impact of developed nursing booklet guide about cervical cancer and its screening on their knowledge and practices.
- Women's compliance with screening in Tanzania.

Table (1): Number and percent distribution of the study participant according to their sociodemographic characteristics

Socio-demographic characteristics	Study Participants (n= 420)	
	No	%
Age(years)		
- 20 – 30	180	42.86
- 30 -40	153	36.43
- 40 -49	87	20.71
Mean ± SD	34.50 ± 8.803	
Educational Level		
- Illiterate	32	7.62
- Primary	176	41.90
- Secondary	112	26.67
- Certificate	56	13.33
- Diploma	21	5
- Bachelor	16	3.81
- Postgraduate (Masters - PhD)	7	1.67
Marital Status		
- Married	284	67.62
- Single	97	23.10
- Divorced	17	4.05
- Widow	22	5.24
Occupation		
- Working	198	47.14
- Not working	222	52.86
Residency		
- Rural	200	47.62
- Urban	220	53.38
Religion		
- Christian	366	87.14
- Muslim	54	12.86
Family Income		
- Enough	186	44.29
- Enough and can save from it	53	12.62
- Not enough	181	43.09

Figure (1): Percent distribution of study participant according to their total score of knowledge about cervical cancer

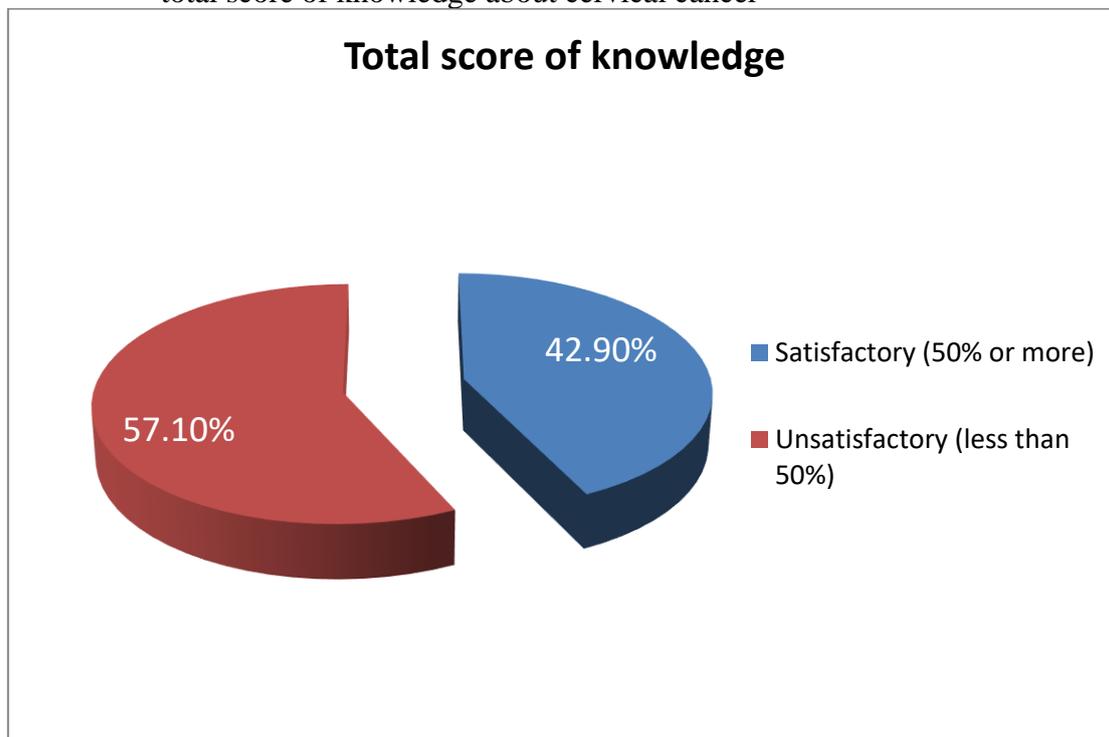


Table (2): Number and percent distribution of study participants according to their total score of attitude regarding cervical cancer screening

Total score of Attitude	Study participants (n= 420)	
	No	%
Negative Attitude (from 30< 50)	1	0.20
Neutral Attitude (from 50 < 70)	168	40.0
Positive Attitude (from 70 -90)	251	59.8

Table (3): Correlation between the study participants total score of knowledge and total score of attitude regarding cervical cancer screening for cervical cancer

Attitude total score	Knowledge total score	
	r	p
	0.124	0.011

r: Pearson correlation coefficient *significant at $P \leq 0.05$

Table (4): Number and percent distribution of study participants according to their practice of cervical cancer screening

Cervical cancer screening practice	Study participants (n=420)	
	No	%
Previous doing cervical cancer screening		
- Yes	142	33.80
- No	278	66.20
If no, reason for not doing (n=248)		
- I see no reason for the test. (Not important)	39	27.46
- I am afraid of the bad results.	33	23.24
- Do not know whom to consult for undergoing test.	58	40.84
- I did not hear about it	65	45.77
- I am afraid of the procedure.	61	42.95
- Others (no troubles, no time)	22	15.49
Age of performance (n=142)		
- 15 to 24	23	16.20
- 25 to 34	57	40.14
- 35 to 44	48	33.80
- 45 to 49	14	9.86
Causes of performing screening (n=142)		
- Follow up complain.	17	11.97
- Periodic follow-up	42	29.58
- Physician request	69	48.59
- Personal interest	14	9.86

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