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Prevalence of cervical cancer and associated factors among women attending gynecological clinic outpatient department at tumbi regional referral hospital, Tanzania

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Abstract

Background: Cervical cancer is the fourth most common cancer among the women. Cervical cancer is preventable primarily through prophylactic Human papilloma virus vaccination and screening for precancerous lesion. About 85% of the case and 90% of the deaths are occurring in developing countries. Therefore, the aim of this study was to assess the prevalence and factors associated with cervical cancer among women attending gynecological clinic outpatient department at Tumbi Regional Referral Hospital, Tanzania.

Method: This was a descriptive cross-sectional study conducted from October 01 and December 31, 2023. A total of 246 women attending gynecological clinic were enrolled in this study. Interviews were conducted with 246 sampled women.

Results: A total number of 246 women were involved in the study. Most participants (48.8) were aged 30-39 years. Only 6.5 percent screened for cervical cancer. The prevalence of cervical cancer found to be 4%.

Conclusion: The prevalence of cervical cancer among women attending gynecological clinic outpatient department at tumbi regional referral hospital was comparatively low, however very few women screened for cervical cancer. There a need to scale up awareness of cervical cancer screening.

Keywords: Cervical cancer; Prevalence screening; Tumbi Hospital; Tanzania

1. Introduction

Cervical cancer is a type of cancer in which the cells of the cervix develop abnormally and form a tumor. Adenocarcinoma and squamous cell carcinoma are the two most common histologic forms of cervical cancer (1). Cervical cancer is preventable primarily through prophylactic HPV vaccination and screening for precancerous lesions(2). Cervical cancer screening is widely done through cytology-based Papanicolaou test (Pap test) and visual inspection with acetic acid (VIA)(3). However, public awareness of these tests in developing countries is limited (4). There are several common risk factors associated with cervical cancer worldwide include HPV infection, multiple sexual partners, early age at the first sexual intercourse, early age at first delivery, parity, smoking, obesity and HIV (5). The major risk factor for cervical cancer is the infection with HPV. Cervical cancer is the fourth most common cancer among women after breast and colorectal cancer (6). In 2020, about 604000 women were diagnosed with cervical cancer worldwide about 342000 women died from the disease (7). About 85% of the cases and 90% of the deaths are occurring in developing countries (8). Cervical cancer accounts for 22% of all female cancers and 12% of all newly diagnosed cancers every year in African women (9). Cervical cancer progress slowly from the precancerous stage to invasive cancer, and it can be prevented

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through screening for early detection, which gives an opportunity for early treatment (10). The majority of cervical cancers in Sub-Saharan Africa over 80% are diagnosed late, owing to a lack of information about cervical cancer screening and access to cervical cancer screening services. As a result, survival rates following surgery or radiotherapy treatment are low (11). While the rate of cervical cancer in the US and Europe has dropped dramatically since the introduction of screening programs, incidence and mortality remain high in Sub-Saharan Africa, largely due to the lack of screening and early treatment. Estimated screening coverage in Sub-Saharan Africa is only 2-20% in urban areas and 0.4-14 in rural areas (12). The 2023 age adjusted incidence and mortality rates for Uganda were 56.2 and 41.4 respectively (13). In the same year, the annual estimates indicated that 6,959 women were diagnosed with cervical cancer and 4,607 died from the disease making it the first most frequent cancer among women in Uganda (14). In Kenya, cervical cancer is the second most common malignancy and nine women die from cervical cancer per day, where it is the primary cause of cancer death (15). Although the government of Kenya has developed a national strategic plan for cervical cancer prevention (16), and it is recommended to screen every 5 years for HIV negative individuals and every 2 years for HIV positive individuals (17), the proportion of women screened for cervical cancer was only 19.4% in 2014 (18). In Tanzania, cervical cancer is the most common female cancer with an estimated age standardized incidence rate of 54 per 100,000 women per year, a rate nearly five times higher than the incidence rate of the next most common cancer among both sexes combined (19). The comorbid epidemic of HIV/ AIDS in the region and lack of screening has contributed to the high incidence of cervical cancer, and late detection and lack of treatment availability have resulted in a high cancer related mortality rate of 32 per, 100,000 women per year (20). Therefore, the aim of this study was to assess the prevalence and factors associated with cervical cancer among women attending gynecological clinic outpatient department at Tumbi Regional Referral Hospital, Tanzania.

2. Material and methods

2.1. Study area and period

This study was conducted at Tumbi Regional Referral Hospital, Kibaha District, Coast Region, Tanzania from October to December, 2023.



Figure 1 Coast Region and its 6 districts

The study was conducted to assess prevalence of cervical cancer and associated factors among women attending outpatient gynecological clinic at Tumbi, Kibaha district. Kibaha is one of the six administrative districts of Coast Region in Tanzania (Figure 1). The district covers an area of 1,502 km² (580 sq mi). Kibaha District is bordered to the northeast by Kibaha Urban District and the north by Chalinze District. The district is bordered to the southeast by Kisarawe District. On the western side the district is bordered by Morogoro District of Morogoro Region. According to the 2012 census, the district has a total population of 70,209 people.

2.2. Study design

The study design was a descriptive cross-sectional study which prevalence and factors associated with cervical cancer among women attending gynecological clinic outpatient department at Tumbi Regional Referral Hospital was studied at a time.

2.3. Study population

Women attending gynecological clinic outpatient department at Tumbi Regional Referral Hospital were registered in the study.

2.4. Sample size

The sample size in this study was 246 participants. The sample size calculation obtained by Kirkwood formula

$$N = z^2 p (1-p) / d^2$$

$$N = (1.96)^2 \times 0.2 (1-0.2) / 0.0025$$

$$N = 0.76832 \times 0.8 / 0.0025$$

$$N = 0.614656 / 0.0025$$

$$N = 246$$

N= Sample size

Z= Confidence interval level 95% in this study which is 1.96

P =Proportional of study prevalence (estimated prevalence) 20% 2021

D= Absolute error or precision 0.05 has to be decided by researcher.

2.5. Sampling Technique

Simple randomly technique was employed to participants attending at Tumbi Regional Referral Hospital gynecological clinic were allocated numbers (even and uneven numbers).

2.6. Data collection

The data collected by structure guided questionnaires and Health information system registry. The questionnaire prepared in English and translated into Swahili to maintain the consistency and content of the questionnaire, confidentiality of information, participant's rights and voluntarily informed consent were secured. The participants were asked the questions and their answers filled in the questionnaire by the researcher. Those who had screened, their cancer status was confirmed on health system registry.

2.7. Data analysis

Questionnaire filled with irrelevant information were removed. The data from questionnaire with relevant information were analyzed with Statistical Package for Social Sciences (SPSS version 20)

2.8. Inclusion criteria

Women attending gynecological clinic willing to participate in the study were included.

2.9. Exclusion criteria

Women attending gynecological clinic but unwilling to participate in the study were excluded.

2.10. Ethical clearance

A letter from Regional Administrative Secretary ethical committee was obtained. The letter submitted to Regional Medical Officer, Coast Regional who forwarded the letter to the Medical Officer in charge who gave permission to use participants at Tumbi Regional Referral Hospital.

3. Results

3.1. Socio-demographic characteristics of participants of Tumbi Regional Referral Hospital.

A total of 246 women participated in this study. Out of these 120 (48.8%) aged 30-39 years, 90 (36.6%) aged 40-49 years, 20 (8.1%) aged 50-59 years and 16 (6.5%) aged 60-65 years. Marital status; single 10 (4.1%), married 230 (93.5%), separated 2(0.8%), window 4 (1.6%). Educational level of participants; not educated 10 (4.1%), primary school 50 (20.3%), secondary school 150 (61.0%) and high school 36 (14.6%). Occupation of participants; civil servants 30 (12.2%), business 20 (8.1%), housewife 46 (18.7%) and peasant 150 (61.0%) as shown in Table 1.

Table 1 Socio-demographic characteristics of participants of Tumbi Regional Referral Hospital

Variable	Frequency	Percentage (%)
Age years		
30-39 years	120	48.8
40-49 years	90	36.6
50-59 years	20	8.1
60-65 years	16	6.5
Marital Status		
Single	10	4.1
Married	230	93.5
Separated	2	0.8
Widows	4	1.6
Educational level		
Not educated	10	4.1
Primary school	50	20.3
Secondary school	150	61.0
High school	36	14.6
Occupation		
Civil servants	30	12.2
Business	20	8.1
Housewife	46	18.7
Peasant	150	61.0

3.2. Participant's awareness of cervical cancer screening methods

In this study many of the participants were not aware of cervical cancer screening methods. For example, 240 (97.6%) of the participants have never heard of cervical cancer screening methods while 6 (2.4%) have heard of it as shown in Table2

Table 2 Awareness of cervical cancer screening methods among women attending gynecological clinic at Tumbi Regional Referral, Hospital

Variable	Frequency (%)	Percentage
Have you ever heard of cervical cancer Screening methods		
No	240	97.6
Yes	6	2.4

3.3. Participants' tendency towards cervical cancer screening

The majority of participants 230 (93.5) have never been screened for cervical cancer while only 16 (6.5%) have as shown in Table.3

Table 3 Tendency towards cervical cancer among women attending gynecological clinic at Tumbi Regional Referral Hospital

Variable	Frequency	Percentage (%)
No	230	93.5%
Yes	16	6.5

Among participants who screened for cervical cancer, 10 (4%) were found to have cervical cancer as confirmed in the Health system registry.

4. Discussion

This study was aimed to identify the prevalence of cervical cancer and associated factors among women attending gynecological clinic outpatient department at Tumbi Regional Referral Hospital, Coast Region, Tanzania. It was observed that most participants (48.8%) were in the age group of 30-39 years. The study done in Uganda using geospatial and population density data, it was estimated that the screening participants in their study presented 0.3% of the entire population of reproductive women (age 15-49 years) in Busoga Region, including the neighboring districts, Kayung and Buikwe (19). In this study 61.0% of participants had secondary school education. This finding was supported by a study conducted in Latin America among women with low and middle income (21), a study conducted in China (22), and a meta-analysis conducted in developed countries (23). One possible explanation is that women with higher levels of education are more likely to engage with maternal health services and undergo gynecologic examinations. This increased engagement provides them with regular opportunities to access obstetric and gynecologic care in health care institutions. Educated women have the ability to read and comprehend information about cervical cancer screening from health care institutions and the media, which can influence their attitudes towards screening. Additionally, educated women are often less influenced by cultural taboos and possess greater autonomy compared to individuals with lower levels of education. This increased autonomy enables them to make informed decisions about their health care, including the choice to undergo a cervical cancer screening. Sixty one percent of participants in our study were peasant. Women with the highest wealth had higher possibility of cervical cancer screening. This finding is supported by a study conducted in Latin America (24). One potential reason is that women with higher financial resources encounter fewer obstacles to accessing cervical cancer screening. Factors such as household responsibilities and transportation limitations may pose fewer challenges for women with more financial means. They have the financial freedom to seek screening service in private or public health facilities, as necessary. Additionally, the economic freedom enjoyed by women with a high wealth index may contribute to their trust in cervical cancer therapy, even if positive outcomes are achieved. Their financial stability may provide them with a sense of security and confidence in the effectiveness of treatment options, leading to a more reasonable attitude towards screening and therapy utilization (23). 97.6% in this study participants have never heard of cervical cancer screening these results was the same to a study done in two rural areas in Lagos, none had been screened for cervical cancer (25). 93.5% of the participants in this study have never been screened for cervical cancer. The result in our study is higher than the results of the study done in Britain reported 91% of women have had a cervical cancer screening test at least once (26) while 73% in Pakistan had gotten a pap test (27). Women with good knowledge of cervical cancer and its screening were five times more likely to practice screening. This finding was in accordance with studies conducted in Ethiopia (28), Tanzania (29) and Malaysia (28), which can be explained by the fact as women's understanding of cervical cancer and cancer screening increases, they were better able to balance the risks and benefits of utilizing the service, and their desire to utilize it grows as well. Additionally, because they were aware of the benefits of screening to improve early diagnosis and treatment of cervical cancer, women who had good knowledge of cervical cancer and its screening services were better able to decide whether or not to use it.

5. Conclusion

The prevalence of cervical cancer among women attending gynecological clinic outpatient department at tumbi regional referral hospital was comparatively low, however very few women screened for cervical cancer. There is a need to scale up awareness of cervical cancer screening.

Recommendation

An innovative study to come up with an effective strategy to address the challenge of cervical cancer screening in Tanzania is highly recommended

Compliance with ethical standards

Acknowledgments

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Statement of ethical approval

Ethical clearance was obtained from the research committee of Regional Administrative secretary, Coast region. Permission to conduct the study was given by Medical Officer in charge Tumbi Regional Referral Hospital gave permission the study to be conducted

Statement of informed consent

Written informed consent was obtained from all women attending gynecological clinic who consented to the study, records were coded and participants / Researcher names were not used. All the information collected remained confidential and was used for purposes of the study only. Participation was voluntary and no incentives were given.

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