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# A study to evaluate the attitude regarding the management of cervical cancer among women in selected rural areas of Pune district 

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#### Abstract

Introduction: Cervical cancer is the second most commonly diagnosed cancer and the third leading cause of cancer death in women worldwide. Nearly $83 \%$ of the world's new cases and $85 \%$ of all cervical cancer-related deaths occur in developing countries. It is primarily caused by human papillomavirus (HPV); a sexually transmitted pathogen that could be prevented with safe sexual practice and using vaccines among others. Cervical cancer is the most common type of cancer in women in rural India. More than $60-70 \%$ of cancers are diagnosed in later stages with poor survival rates. Screening helps in the early detection of cervical cancer and better survival. Awareness and attitudes of women towards cervical cancer screening may determine health-seeking behavior. The study aimed to assess the knowledge and attitude of women regarding the management of cervical cancer. Methods: This was a questionnaire-based cross-sectional study conducted among women. A semistructured questionnaire was developed. After obtaining permission from the Institutional Ethics Committee, the questionnaire was administered to the women in the language of their preference. Women were educated after the data collection and a hand-out was provided. Data was analyzed using SPSS Version 10. Independent ' $t$ ' test was used to compare mean attitude scores across sociodemographic groups. 400 samples for the study were selected by using a non-probability convenient sampling technique. Results: The baseline attitude analysis revealed that a significant majority of participants ( $90 \%$ ) held a negative attitude toward screening and treatment of cervical cancer. Conclusion: The attitude of participants is negative about the management of cervical cancer. This finding is consistent with previous studies that have identified attitude gaps among women regarding cervical cancer.


Keywords: Nursing interventional package, screening, treatment, cervical cancer

## Introduction

Cervical cancer is a cancer of the cervix, the organ connecting the uterus and the vagina. It is predominantly caused by human papillomavirus (HPV) which is a sexually transmittable infection-causing pathogen. Therefore, effective interventions for the prevention of HPV infections can prevent cervical cancer ${ }^{[1]}$. Despite its preventable nature, globally cervical cancer is regarded as the third most common form of cancer among women after breast and colorectal cancer ${ }^{[2]}$. The women of poorer communities are mostly affected by the disease. It is evidenced that, approximately $83 \%$ of the world's new cases and $85 \%$ of all cervical cancer deaths reported are from developing countries ${ }^{[3]}$.
The highest incidence rate of cervical cancer was observed in Guinea with nearly $6.5 \%$ of women developing cervical cancer before the age of 75 years. It affects women $<45$ years more than the other major cancers ${ }^{[5]}$. It is also the leading cause of cancer deaths in Eastern and Central Africa. Most of these deaths can be prevented through universal access to comprehensive cervical cancer prevention and control programs which can potentially reach all girls with HPV vaccination and all women who are at risk with screening and treatment for pre-cancer ${ }^{[4]}$. Persistent infection with around 15 high-risk HPV types is the major risk factor for cervical cancer with HPV-16 and HPV-18 infections accounting for about $70 \%$ of the total cases. Multiple sexual partners, younger age at first sexual intercourse, early marriage, poor dietary habits, immune suppression, and cigarette smoking also serve as risk factors for the HPV persistent infection and progression to cancer ${ }^{[5]}$.

A study on global cancer transitions according to the Human Development Index reveals that cervical cancer is estimated to be more common than both breast and liver cancer. The study also suggests that rapid socio-economic transition in many countries might reduce infection-related cancers. However, this might be replaced by an increasing number of new cases that are more associated with reproductive, dietary, and hormonal factors ${ }^{[6]}$.

## Need of the study

The burden of cervical cancer is reasonably low in the developed countries of the world. However, the situation is quite the reverse in developing countries. While the incidence is decreasing in the former, it is on the increase in the latter. In most parts of Sub-Saharan Africa, South America, the Caribbean, and Southern Asia, cervical cancer is the leading cause of cancer death and premature death among women ${ }^{[7]}$. Sub-Saharan Africa is the region with the highest incidence of cervical cancer in the world with concomitant high mortality affecting women at their prime. This is a source of great concern because cervical cancer is preventable and curable using currently available methods. The onset of the HIV/AIDS epidemic that is highest in the region has also raised the problem of cervical cancer to a serious level ${ }^{[8]}$.
According to the 2009 World Health Organization Report, cervical cancer ranks as the second most common cancer among women in Ethiopia. The mean outpatient cost per patient for cervical cancer in Ethiopia is estimated to be $\$ 407.2$. The mean inpatient cost for hospitalized patients was also estimated to be $\$ 404.4$. The average direct inpatient cost was $\$ 329$ and for every additional day of inpatient hospital stay, there was an estimated daily incremental inpatient cost of $\$ 4.2$. This is very high and unimaginable for many patients to get treatment considering the socioeconomic status of the people ${ }^{[9]}$.
Various studies in different countries show differences in women's knowledge and attitudes regarding cervical cancer and its prevention. Unlike developed nations, in developing countries, women had a poor level of knowledge about cervical cancer and its prevention. A significant direct relationship was also found between women's knowledge and attitude towards cervical cancer and its prevention and subsequent utilization of Pap smear tests in some studies ${ }^{[10]}$. A very low rate of cervical cancer screening tests is reported across literature in low and middle-income countries. A study on the health-seeking behavior of patients with cervical cancer in Ethiopia also revealed that women had a very low awareness of cervical cancer and they mostly prefer traditional remedies as a treatment option for the early stages of the disease. According to this study, the barriers to seeking any type of treatment identified were a lack of awareness and access to proper health services. It also showed, women with cervical cancer were excluded from society and received poor emotional support ${ }^{[10]}$.

## Aim of the study

This study aims to evaluate the attitude regarding the management of cervical cancer among women residing in selected rural areas of Pune district.

## Material and Method

The descriptive Survey Approach was considered as the appropriate measure to assess the attitude regarding cervical
cancer among women. The objective was to assess the attitude regarding cervical cancer management among women in rural areas. A questionnaire-based cross-sectional study design was used. The study's samples were women who resided in a specified rural area of the Pune District and satisfied the selection criteria. The study's primary goal was to gather a large sample that would demonstrate statistical significance while still being cost-effective. 400 samples for the study were selected by using a non-probability convenience sampling technique, taking into account the investigator's sample knowledge of the PHC and the availability of time.

## Population and Sample

The primary objective was to secure a sample size that was sufficiently sizable to demonstrate statistical significance while also maintaining practical efficiency. Taking these factors into account, 400 women between the ages of 25 and 50 were chosen as the sample size. This selection was based on factors such as time constraints, as well as the investigator's familiarity with the Primary Health Care Center, and the accessibility of potential participants.

## Tool Description

The study tool was divided into 2 parts:
Part A: Demographic variable questionnaire
Part B: The scale was designed to assess the attitude regarding the management of cervical cancer.

## Data Collection

Selected the target population of women in the selected rural area of Pune district. Obtained ethical approval and informed consent from the participants. Developed a scale that assesses attitudes regarding the management of cervical cancer. Finally, the baseline information on knowledge attitude about the management of cancer of the cervical cavity was collected.

## Results

In the present study, the demographic variables were collected and analyzed to gain insights into the surveyed population. When it came to age, 182 participants, or $45.5 \%$ of the sample, were in the 18-29 age range, which included the bulk of participants. The next significant age group was 30-39 years, with 97 participants, making up $24.25 \%$ of the total. Additionally, 104 participants ( $26 \%$ ) were aged between $40-49$ years, while 11 ( $2.75 \%$ ) were in the $50-59$ years range. A smaller proportion, comprising 6 individuals (1.5\%), were aged 60 years or above.

Regarding education, the survey found that the largest segment of participants had completed primary education, with 167 individuals ( $41.75 \%$ ) falling into this category. The secondary education group consisted of 129 individuals ( $32.25 \%$ ), while 84 participants ( $21 \%$ ) had graduated from college. A smaller proportion, representing 20 individuals (5\%), had pursued post-graduate studies. When it came to occupation, the survey participants were primarily housewives, with 198 individuals (49.5\%) identifying as such. Business-related occupations accounted for 133 participants (33.25\%), and 69 individuals (17.25\%) reported being retired.
The survey also gathered information about family income. The majority of participants (44\%) reported a family income between 25,000 and 49,999 , totaling 176 individuals. 51
participants ( $12.75 \%$ ) reported a family income below 24,999, while 95 individuals ( $23.75 \%$ ) fell into the 50,000 74,999 income range. A smaller proportion, consisting of 25 individuals ( $6.25 \%$ ), reported a family income between 75,000 and 99,999 . The highest income category, comprising 53 individuals ( $13.25 \%$ ), represented those with a family income of 100,000 or more.
Regarding marital status, 254 people ( $63.5 \%$ ) were single, making up the bulk of participants. The married group consisted of 122 individuals (30.5\%), while a smaller proportion of participants were either widowed (12 individuals, $3 \%$ ), divorced (12 individuals, $3 \%$ ), or separated ( 0 individuals). Regarding sexual orientation, the vast majority of participants identified as heterosexual, with 395 individuals ( $98.75 \%$ ) reporting this orientation. A small percentage of participants identified as lesbian (5 individuals, $1.25 \%$ ), while none identified as bisexual or other.
In terms of insurance status, 188 participants ( $47 \%$ ) reported having private insurance, while 94 individuals ( $23.5 \%$ ) were covered by Medicare. An additional 104 participants (26\%) reported having medi-claim, and 14 individuals ( $3.5 \%$ ) were uninsured. None of the participants fell into the "other" category. Primary language usage varied among the participants, with 195 individuals (48.75\%) reporting Marathi as their primary language, followed closely by Hindi, which was reported by 181 participants ( $45.25 \%$ ). A smaller percentage reported English as their primary language (19 individuals, $4.75 \%$ ), and a minority reported other languages ( 5 individuals, $1.25 \%$ ).
Regarding access to healthcare services, the majority of participants ( $43.75 \%$ ) reported easy access, with healthcare facilities located within 30 minutes of their home or workplace. A moderate level of access, within an hour of home or work, was reported by 112 individuals (28\%). A smaller proportion $(23.25 \%)$ reported limited access, with healthcare facilities located more than an hour away. A minority of participants ( 10 individuals, $2.5 \%$ ) reported having no access to healthcare services.
Finally, the survey assessed family history of any type of cancer, with 382 participants ( $95.5 \%$ ) reporting no family history of cancer, while 18 individuals ( $4.5 \%$ ) reported a positive family history of cancer.


Fig 1: Pie graph showing the Family history of any type of cancer

Table 1: Baseline attitude regarding screening and treatment of cervical cancer among women before intervention

| Attitude Pre-Test | Frequency | Percentage |
| :---: | :---: | :---: |
| Negative Attitude | 360 | 90 |
| Positive Attitude | 40 | 10 |
| Mean | 54.33 |  |
| SD | 18.49 |  |

The data analysis of gender pretest opinions on cervical cancer detection and treatment before the intervention reveals the following findings:

1. Negative Attitude: Results depict 360 people, or $90 \%$ of the participants, had a negative attitude regarding the management of cervical cancer.
2. Positive Attitude: A smaller proportion of participants, 40 individuals $(10 \%)$, had a positive attitude regarding the management of cervical cancer.

The average score for all participants in the pretest dispositions was determined to be 54.33, which is the mean score. The standard deviation (SD) was found to be 18.49, representing the degree of variability or dispersion of the scores around the mean.
These results imply that a sizable majority of women had unfavorable opinions about identifying and treating cervical cancer. This highlights the need for the intervention program to address and potentially change these negative attitudes, promoting a more positive outlook and understanding of cervical cancer screening and treatment.

Table 2: Descriptive statistics to compare categories of pretest attitude regarding screening and treatment of cervical cancer among women

| Attitude categories | Frequency | Mean Median | S.D. | Min <br> value | Max <br> value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Negative attitude | 360 | 51.14 | 57.0 | 16.49 | 20 | 74 |
| Positive attitude | 40 | 83.82 | 82.0 | 5.41 | 76 | 98 |
| Overall pretest attitude | 400 | 54.88 | 54.0 | 18.49 | 20 | 98 |

There were two types of women's pretest views on cervical cancer diagnosis and care: Negative attitude and Positive attitude.
The Negative attitude category consisted of 360 participants, with an average attitude score of 51.14 . The median attitude score for this category was 57.0, suggesting that half of the participants had attitude scores below this value. The standard deviation of 16.49 reflected a considerable variability in attitudes within this category. The range of attitude scores ranged from 20 as the minimum to 74 as the maximum.
Forty people belonging to the Positive Attitude group, however, had a more upbeat attitude on cervical cancer assessment and treatment. These participants obtained an impressive average attitude score of 83.82 . The median score for this category was 82.0 , the standard deviation of 5.41 revealed a moderate variability in attitudes within this category, suggesting some diversity in the level of positivity. The range of attitude scores ranged from 76 as the minimum to 98 as the maximum.
Considering the overall pretest attitude scores, which encompassed all participants, the average attitude score was 54.88, with a median of 54.0. The standard deviation of 18.49 indicated a considerable variability in attitude scores across all categories. The range of attitude scores spanned from 20 as the minimum to 98 as the maximum.

Table 3: Descriptive statistics to compare categories of baseline attitude regarding screening and treatment of cervical cancer among women

| Test | Attitude categories | F | Mean | Median | S.D. | Min value | Max value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pretest attitude score | Negative attitude | 360 | 51.14 | 57.0 | 16.49 | 20 | 74 |
|  | Positive attitude | 40 | 83.82 | 82.0 | 5.41 | 76 | 98 |
|  | Overall pretest Attitude | 400 | 54.88 | 54.0 | 18.49 | 20 | 98 |

Women's views on the identification and management of cervical cancer were compared before and after the test using descriptive data. The following outcomes were attained:

## For Attitude Scores

Negative attitude: The category consisted of 360 participants, with an average attitude score of 51.14. The median attitude score was 57.0 , indicating that half of the participants had attitude scores below this value. The standard deviation was 16.49 , reflecting a considerable variability in attitudes within this category. The range of attitude scores ranged from 20 as the minimum to 74 as the maximum.

Positive attitude: This group of forty people had a more optimistic outlook on cervical cancer detection and management. The average attitude score was 83.82 , and the median score was 82.0 . The standard deviation was 5.41 , suggesting a relatively low variability in attitudes within this category. The range of attitude scores ranged from 76 as the minimum to 98 as the maximum.
Overall pretest attitude: This encompassed all 400 participants, with an average attitude score of 54.88 and a median of 54.0. The standard deviation was 18.49, indicating a considerable variability in attitude scores across all categories. The range of attitude scores spanned from 20 as the minimum to 98 as the maximum.

## Association between attitude regarding screening and treatment of cervical cancer among women with their selected demographic variables

The results show that age group ( $\mathrm{p}<0.05$ ), marital status ( p $=0.03$ ), sexual orientation ( $\mathrm{p}<0.05$ ), insurance status ( $\mathrm{p}=$ 0.009 ), native language ( $\mathrm{p}=0.04$ ), and family history of cancer ( $\mathrm{p}=0.01$ ) had a substantial impact on women's opinions toward cervical cancer screening and treatment. These results emphasize how important it is to take these demographic factors into account when addressing and enhancing attitudes toward cervical cancer.

## Discussion

Ninety percent of those questioned had unfavorable opinions toward cervical cancer screening and treatment, according to the pretest attitude research. This discovery aligns with the outcomes of other investigations carried out on other illnesses, such HIV/AIDS or breast cancer, where unfavorable perceptions and attitudes have often been noted. These negative perceptions may stem from societal conventions, cultural norms, or a lack of understanding about the need of timely diagnosis and therapy. The presence of negative attitudes underscores the need for interventions aimed at promoting positive attitudes and dispelling myths surrounding cervical cancer.
Ninety percent of participants in the current study had an unfavorable attitude about cancer in the cervical cavity screening and treatment, according to the pretest analysis. This is a large majority of participants. Conversely, the
study conducted by on a different disease, a lower proportion of participants exhibited a negative attitude. These findings suggest that negative attitudes may vary across different diseases, with cervical cancer demonstrating a higher prevalence of negative perceptions, beliefs, or biases among the surveyed population.
These findings imply that understanding and perspective may not always correlate across various illnesses. It highlights the need for further investigation to better understand the factors influencing attitudes towards specific diseases and their potential interaction with knowledge levels.
The results are similar to a study that assessed the women's attitude, and of those (501) who had heard about cervical cancer, 370 ( $73.9 \%$ ) and 366 ( $73.1 \%$ ) believed that having multiple sexual partners and early marriage are risk factors for cervical cancer respectively. This may be attributed to the mere community belief that any unsafe sexual behavior is a risk for diseases. Because the community believes that people having multiple sexual partners always get punishment for their sins from God. Similarly, 442 (88.2\%) believed that cervical cancer is a major health problem for reproductive age group women. This may again be the result of a mere belief that any cancer is a serious health problem [12].

## Conclusion

The survey revealed that nearly all of the participants had negative views on cervical cancer diagnosis and therapy. A lack of understanding about the need for early detection and treatment, social standards, or cultural norms may be the root cause of this negative mindset.
Most of the women had negative attitudes and had not undergone screening for cervical cancer. As mass media was the common source of information, they could be used to raise the awareness of women to promote early detection. There is a need for community-based studies to know the practices of doctors and assess ${ }^{[1]}$ : If they are educating the women about cervical cancer and its screening ${ }^{[2]}$. Whether they offered screening services to the eligible women who consulted them for any other health problem.
Overall, the study highlights both positive and negative attitudes among women towards cervical cancer management. Positive attitudes such as awareness of the importance of screening, willingness to seek healthcare services, and support for preventive measures indicate areas of strength that can be leveraged to improve cervical cancer outcomes in rural communities. On the other hand, negative attitudes such as fear of screening procedures, stigma surrounding cancer diagnosis, and misconceptions about the disease represent significant barriers that need to be addressed through targeted interventions.

## Conflict of Interest

None

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