Knowledge, Attitude and Practice of Cervical Cancer Screening

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ABSTRACT

Background: Cervical malignancy continues to pose a significant health issue worldwide, despite advances in prevention and treatment. Screening programs have proven effective in decreasing the incidence malignancy of cervix and its related mortality. However, the success of these programs relies heavily on individuals' knowledge, attitude, and practice towards the screening of the cervix malignancy. **Objective:** To determine the knowledge and attitude of cervical cancer screening in women attending outpatient department at Gynae Unit 1, Civil Hospital, Karachi. **Study Design:** Cross sectional study. **Settings:** Study was conducted at Department of Gynecology, Civil Hospital, Karachi Pakistan. **Duration:** Six months after approval of synopsis from 08-06-2021 till 08-12-2021. **Methods:** Data collection involved administering structured questionnaires designed to assess participants' knowledge regarding cervical cancer, their attitudes toward screening, and their actual practices related to undergoing screening procedures. The questionnaire items were developed based on established guidelines and previous literature on cervical cancer screening. Trained interviewers conducted face-to-face interviews with the participants to ensure clarity and accuracy in responses. **Results:** Mean age in our study was 37.14±4.49 years. Among the 71 women surveyed, the majority of the women 63.38%, lacked adequate knowledge regarding cervical cancer screening, while only 36.62% had adequate knowledge. Additionally, in terms of attitude, only 16.90% of the women showed a positive attitude, while the majority, accounting for 83.10%, had a negative attitude. **Conclusion:** The study findings indicated that the majority of women showed limited awareness and a negative attitude towards screening of the cervix cancer. Lack of awareness seems to be a significant factor contributing to this negativity. Improving awareness and knowledge about cervical cancer and its screening programs could potentially encourage women to engage in proactive screening behaviors.

Keywords: Cervical cancer, Screening, Knowledge, HPV and attitude.

INTRODUCTION

Gynecological malignancies represent a significant cause of morbidity and mortality among women, placing a considerable strain on healthcare resources, particularly in low- and middle-income countries.[1] In Pakistan, the incidence of cervical cancer has increased, it ranks among the top 10 most prevalent cancers globally, it stands as the third most frequent malignancy affecting women, with an incidence rate of 5.98%.[2] According to the World Health Organization, it is estimated that by 2030, over half a million women will lose their lives to cervical carcinoma, with more than 98% of these fatalities expected to be concentrated in developing nations such as Pakistan.[3] Research on cervical cancer has indicated that individuals who delay seeking medical care experience reduced treatment effectiveness and poorer survival outcomes. In its initial phases, cervical cancer may not exhibit noticeable symptoms. However, individuals may later experience symptoms such as malodorous vaginal discharge and abnormal bleeding, including bleeding occurring between menstrual cycles, post-coital bleeding, or bleeding following menopause. Malignancy of cervix is typically linked with human

papillomavirus (HPV) infection, along with various other factors such as having multiple pregnancies, smoking, long-term use of oral contraceptives, low socioeconomic status, sexually transmitted infections, early onset of sexual activity, compromised immune system, and conditions associated with poverty.[4-6] The majority of cervical lesions do not advance to cancer; however, for those that do, the progression is typically slow. This characteristic makes cervical cancer predominantly preventable through efficient screening methods.[7]Papanicolaou cytological testing, commonly referred to as the Pap smear test, serves as a crucial screening tool for identifying precancerous lesions of the cervix, thereby significantly reducing its incidence by 75-90%.[7] While routine screening utilizing the Pap smear test has markedly decreased cervical cancer rates in developed nations, the situation is markedly different in low- and middle-income countries. Here, the scarcity of screening facilities and HPV vaccination programs can be attributed in part to limited resources. However, the primary obstacle lies in the widespread lack of knowledge and awareness among the population regarding the importance of early cancer diagnosis and the associated higher rates of the mortality.[7,8] Several other barriers to screening encompass inadequate understanding of the disease, limited awareness of preventive healthcare measures, economic and geographic challenges in accessing services, reluctance among women due to cultural factors, and insufficient support and encouragement from both communities and families.[9] The implementation of diverse screening methods for cervical cancer has resulted in a notable decrease in both morbidity and mortality rates associated with the disease. Several screening techniques have been developed to facilitate the early detection of cervical cancer.[10] Recent research by Riaz *et al*. highlighted a concerning trend: a majority of participants demonstrated insufficient knowledge regarding cervical cancer, HPV, Pap smear tests, and HPV vaccination. It is well-established that knowledge and attitudes within a given population greatly influence their healthcare practices.[7] Therefore, there was assumed a need to assess the levels of knowledge, perceptions, and practices related to the screening of cervical carcinoma. Numerous national and international studies have indicated that while women may possess adequate knowledge about cervical cancer, there remains a notable gap between this knowledge and actual screening practices within the recommended time frames. Hence, this study was done to evaluate the knowledge and attitudes of women regarding screening of cervical carcinoma screening within our district. By gathering this data, we aimed to facilitate better planning and implementation of healthcare initiatives targeted at improving the overall well-being of women in our community.

METHODS

This cross-sectional study was conducted at Department of Gynecology, Civil Hospital Karachi. Study duration was six months from 08-06-21 till 08-12-21. Non-probability consecutive sampling techniques was used. All sexually active or married women aged 18 years or older, presenting at the outpatient department (OPD) with gynecological complaints, and possessing the ability to understand and respond to survey questions regarding cervical cancer screening, regardless of their socioeconomic background or educational level, were included in the study. Patients with mental instability, significant concurrent illnesses, a prior suspicion of cervical cancer identified through past screenings, or speech impairments were excluded. In conducting the study on the knowledge, attitude, and practices of cervical cancer screening among sexually active or married women visiting the outpatient department (OPD) for gynecological complaints, a comprehensive methodology and data collection procedure were implemented. Initially, ethical approval was obtained from the relevant institutional review board. An inform consent was taken prior to enrolment of the study. Subsequently, eligible participants meeting the inclusion criteria were recruited from the OPD setting. Data collection involved administering structured questionnaires designed to assess participants' knowledge regarding cervical cancer, their attitudes toward screening, and their actual practices related to undergoing screening procedures. The questionnaire items were developed based on established guidelines and previous literature on cervical cancer screening. Trained interviewers conducted face-to-face interviews with the participants to ensure clarity and accuracy in responses. Additionally, relevant demographic and clinical information was collected. Data collection procedures adhered to ethical standards, ensuring participant confidentiality and privacy throughout the process. The gathered data were then analyzed using SPSS version with appropriate statistical methods to elucidate patterns, associations, and trends in knowledge, attitudes, and practices regarding cervical cancer screening among the targeted population.

The data was entered and analyzed with the help of SPSS version 21.0. Mean + Standard deviation was calculated for age. Frequency and percentages will be calculated for residence status, marital status, occupational status, educational status, family income status, menstrual history, knowledge and attitude. Stratification with respect to age, residence status, marital status, occupational status, educational status, family income status and menstrual history was controlled through stratification. Post stratification chi-square test was used. P value ≤0.05 was considered as significant.

RESULTS

The patients' average age was 34.14 years, with 76.06% falling between 36-50 years old. Urban residency was predominant at 81.69%, contrasting with rural residency at 18.31%. Menstrual status varied, with 45.07% experiencing normal cycles, 43.66% with abnormal uterine bleeding, and 11.27% reporting postmenopausal bleeding. Occupationally, housewives formed the largest group (51.97%), followed by job workers (32.39%) and housemaids (5.63%). Marital status showed 91.55% were married, 5.63% divorced/separated, and 2.82% widowed. Furthermore, the educational status and socioeconomic status are shown in table 1.

Table 1: Demographic characteristics of patients (n=71)

Variables		Frequency	Percentage
Age	15-35	17	23.94%
	36-50	54	76.06%
Residence Status	Urban	58	81.69%
	Rural	13	18.31%
Menstrual Status	Normal	32	45.07%
	Abnormal uterine bleeding	31	43.66%
	Postmenopausal bleeding	8	11.27%
Occupational Status	Housewife	44	51.97%
	Job worker	23	32.39%
	House maid	4	5.63%
Marital Status	Married	65	91.55%
	Divorced/ separated	4	5.63%
	Widowed	2	2.82%
Educational Status	Illiterate	4	5.63%
	Intermediate	19	26.76%
	Bachelors	48	67.61%
Family monthly Income	<10000	4	5.63%
	10000-15000	18	25.35%
	15000-20000	22	30.99%
	>20000	27	38.03%

In terms of knowledge and attitude regarding cervical cancer screening among 71 women, the majority, accounting for 63.38%, had inadequate knowledge, while 36.62% had adequate knowledge. Furthermore, concerning their attitude, only 16.90% of patients exhibited a positive attitude, while the majority, comprising 83.10% of patients, had negative attitude. Figure 1

The frequency of knowledge regarding cervical cancer was statistically insignificant according to the age of women, residential status, occupational status, marital status and educational status (p->0.05), while family monthly income does seem to have an impact on knowledge, with significant differences noted between income brackets (p-0.03). Table. 2

Figure 1: Knowledge and attitude regarding cervical cancer screening (n=71)
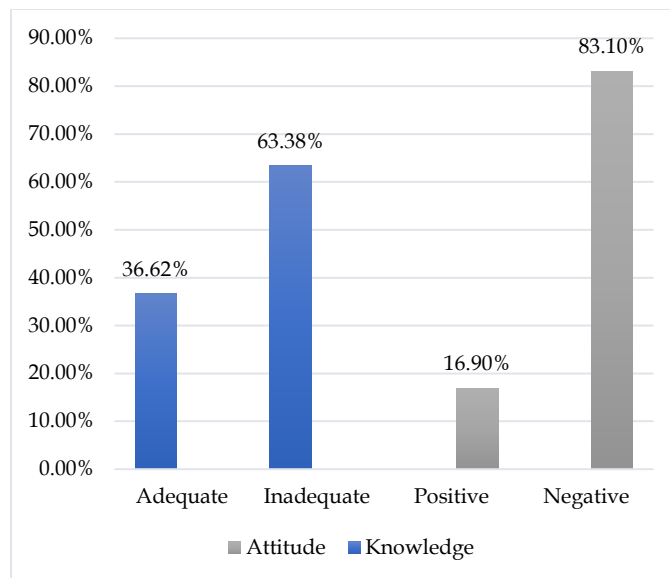

Table 2: Knowledge regarding cervical cancer among patients according to demographic characteristics n=71

Variables		Knowledge		p-value
		Adequate	Inadequate	
Age	15-35	05 (29.4%)	12 (70.6%)	0.47
	36-50	21 (38.9%)	33 (61.1%)	
Residence status	Urban	20 (34.5%)	38 (65.5%)	0.43
	Rural	06 (46.2%)	07 (53.8%)	
Menstrual status	Normal	12 (37.5%)	20 (62.5%)	0.98
	Abnormal uterine bleeding	11 (35.5%)	20 (64.5%)	
	Post-menopausal bleeding	03 (37.5%)	05 (62.5%)	
Occupational status	Housewife	19 (43.2%)	25 (56.8%)	0.17
	Job worker	07 (30.4%)	16 (69.6%)	
	House maid	00 (00%)	04 (100%)	
Marital status	Married	26 (40%)	39 (60%)	0.15
	Divorced/ separated	00 (00%)	04 (100%)	
	Widowed	00 (00%)	02 (100%)	
Educational Status	Illiterate	02 (50%)	02 (50%)	0.08
	Intermediate	03 (15.8%)	16 (84.2%)	
	Bachelors	21 (43.8%)	27 (56.2%)	
Family monthly Income	<10000	00 (00%)	04 (100%)	0.03
	10000-15000	10 (55.6%)	08 (44.4%)	
	15000-20000	05 (22.7%)	17 (77.3%)	
	>20000	11 (40.7%)	16 (59.3%)	

The attitude regarding cervical cancer was statistically insignificant according to the age of women, residential status, occupational status, marital status, educational status and socioeconomic status (p->0.05). Table. 3

Table 3: Attitude regarding cervical cancer among patients according to demographic characteristics n=71

Variables		Attitude		p-value
		Positive	Negative	
Age	15-35	04 (23.5%)	13 (76.5%)	0.40
	36-50	08 (14.8%)	46 (85.2%)	
Residence status	Urban	09 (15.5%)	49 (84.5%)	0.51
	Rural	03 (23.1%)	10 (76.9%)	
Menstrual status	Normal	06 (18.8%)	26 (81.2%)	0.66
	Abnormal uterine bleeding	04 (12.9%)	27 (87.1%)	
	Post-menopausal bleeding	02 (25%)	06 (75%)	
Occupational status	Housewife	07 (15.9%)	37 (84.1%)	0.54
	Job worker	05 (21.7%)	18 (78.3%)	
	House maid	00 (00%)	04 (100%)	
Marital status	Married	11 (16.9%)	54 (83.1%)	0.30
	Divorced/ separated	00 (00%)	04 (100%)	
	Widowed	01 (50%)	01 (50%)	
Educational Status	Illiterate	01 (25%)	03 (75%)	0.90
	Intermediate	03 (15.8%)	16 (84.2%)	
	Bachelors	08 (16.7%)	40 (83.3%)	
Family monthly Income	<10000	00 (00%)	04 (100%)	0.15
	10000-15000	06 (33.3%)	12 (66.7%)	
	15000-20000	02 (9.1%)	20 (90.9%)	
	>20000	04 (14.8%)	23 (85.2%)	

DISCUSSION

Cervical carcinoma ranks high among women, being the second most common condition in those under 50 years old and the third most prevalent across all age groups, trailing only breast and oral cavity cancers.[9,11] Despite its preventable nature, its mortality rate remains distressingly high in Pakistan due to neglect in screening, prevention, and vaccination efforts.[9] This study aimed to assess the knowledge and attitudes towards cervical cancer screening among 71 women attending the outpatient department for various gynecological issues. The participants, with an average age of 34.14 years, were predominantly urban residents (81.69%) and presented with diverse menstrual statuses, with a notable proportion reporting abnormal bleeding patterns. Housewives constituted the largest occupational group (51.97%), and the majority of participants were married (91.55%) with lower educational and socioeconomic backgrounds. However, Kumari S. *et al*[13] reported that the participants in their study ranged in age from 30 to 60 years, with an average age of 40.56 years. Their slightly higher mean age could be attributed to the broader age range covered in their study. In the comparison of this study Ghosh S. *et al*[14] found that the mean age of participants was 39.8 ± 10.1 years, with a majority of women were (89.3%) currently married. About 34% of participants lacked formal education, while merely 5.1% had completed more than 10 years of schooling. Among the employed individuals, 39.8% were engaged in unskilled manual labor and like this study they observed that a substantial proportion of participants (61.1%) belonged to a low socioeconomic status.[14] Consistently Tekle T *et al*[15] found that women's ages ranged from 30 to 34 years, with a mean age of 36.8 (± SD 4.98), spanning from 30 to 49. A majority of participants, 309 (59.9%), were married. Over one-third of respondents, 177 (34.3%), held a diploma or degree, while 110 (21.3%) had no formal education. The occupational distribution showed that the majority of respondents, 125 (24.2%), were housewives, followed by 107 (20.7%) in private employment and 100 (19.4%) in governmental employment. Additionally, more than half, 345 (66.9%), resided in urban areas with a lower monthly income.[15] Shamaun S *et al*[16] conducted a study involving 226 women, with an average age of 41.25 years. These women had an average of 3.8 children. The study revealed that the majority of the participants were housewives (88.9%), and 61.9% of the women lacked formal education. According to another study approximately 55 individuals (44.3%) lacked formal education, with the majority being housewives (94.7%), while 56 (25.3%) were employed. Moreover, more than half of the respondents (58.7%) resided in urban areas, while 57 (41.3%) lived in rural regions.[17]

In this study, concerning the knowledge and attitude towards cervical cancer screening among 71 women, the findings indicated that the majority, constituting 63.38%, possessed inadequate knowledge. Regarding their attitude, only 16.90% of the patients displayed a positive attitude, while the remaining 83.10% exhibited a negative attitude. Similarly, in a study by Taneja N *et al*,[17] it was reported that among surveyed women, 20.31% demonstrated knowledge about cervical cancer screening, 43.64% exhibited a positive attitude, and 13.22% engaged in screening practices. Additionally, Shamaun S *et al*,[16] found that only 41.2% of women were aware of cervical cancer, 33.6% had knowledge about

cervical screening, and merely 15.9% had undergone screening previously. Awareness of the HPV vaccine was minimal, with only four women (1.8%) being aware of it, while 31% (70) expressed willingness to undergo cervical screening. Remarkably, a vast majority of women (96.9%) lacked awareness of the risk factors associated with cervical cancer. Like this study Siddiqa A *et al*[17] around 29.3% of respondents demonstrated considerable knowledge regarding cervical cancer screening, while approximately 70.7% exhibited limited knowledge. Of the participants, 36% displayed a positive attitude, whereas 64% showed a negative attitude towards cervical cancer screening. However Javaeed A *et al*[19] revealed a higher KAP score compared to previous studies conducted in Pakistan. However, there is still considerable scope for improvement. Women in developed nations exhibit significantly superior knowledge, attitudes, and practices regarding cervical cancer.

In this study, the analysis of attitude towards cervical cancer revealed statistically insignificant variations across various demographic factors such as age, residential status, occupational status, marital status, educational level, and socioeconomic status (p > 0.05). However, it's worth noting that other studies have reported inconsistent findings, where the Knowledge, Attitude, and Practice (KAP) scores significantly differed among respondents with varying levels of education.[17,19-21] Additionally, Hirani S *et al*,[22] found that despite the majority of women in their study belonging to the higher socioeconomic status and being predominantly educated, while their understanding and implementation of methods to prevent and screen for cervical cancer were inadequate. This discrepancy could be attributed to the limited sample size considered in our study, which may have affected the statistical power to detect significant associations. Moreover, our study also revealed a notably low rate of knowledge and positive attitude towards cervical cancer screening among participants. Given these findings, it's imperative to implement targeted interventions aimed at improving awareness and promoting positive attitudes towards cervical cancer screening, particularly among women with higher education levels and socioeconomic status. Educational campaigns and outreach programs should be designed to address the gaps in knowledge and attitudes identified in this study. Additionally, efforts should be made to enhance accessibility to screening services and provide comprehensive information about the importance of early detection and prevention of cervical cancer. Collaborative efforts involving healthcare providers, policymakers, and community organizations are essential to effectively address the challenges identified and improve cervical cancer screening practices among women

CONCLUSION

As per the study conclusion, most of the women observed with insufficient knowledge and negative attitudes towards cervical cancer screening. There is a clear need for targeted information dissemination about cervical cancer and screening, particularly among less educated women. Educational campaigns involving mass media and providing information during reproductive health visits are proposed to improve knowledge and awareness, potentially enhancing screening behaviors. Addressing misconceptions and fears, especially among women who have never been screened, is crucial for intervention.

LIMITATIONS

Limited study sample size.

SUGGESTIONS / RECOMMENDATIONS

Future research should focus on understanding the impact of cervical cancer screening information provided by healthcare providers and effective interventions targeting unscreened women. Additionally, addressing barriers such as limited access to providers and low awareness of screening importance remains essential for increasing screening rates.

CONFLICT OF INTEREST / DISCLOSURE

None.

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