

## Knowing is not enough: Awareness, Practice Gaps in Cervical Cancer Screening in Young Women

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### ABSTRACT

**Background:** Cervical cancer is one of the causes of morbidity related to cancer in low-resource environments in women. Even though there are good screening strategies, their use among young women is low.

**Objective:** To assess awareness, screening practices, and the gap between knowledge and behavior regarding cervical cancer screening among young women.

**Methodology:** The study was a descriptive cross-sectional study undertaken between January 2023 and January 2024 in District Women Hospital MTI DIKHAN and Liaquat Memorial Hospital Kohat. Convenience sampling was applied to enroll 62 women between the ages of 18-29 years. The information was gathered by way of structured interviews. Descriptive statistics was used to analyze knowledge and screening practices and chi-square test was used to test associations.

**Results:** Majority of the respondents (90.3) had heard of cervical cancer and 79.0% had heard about Pap smear test. Nevertheless, only one out of five had ever been screened (17.7). Good knowledge was highly related with an increased screening intake ( $p = 0.002$ ). Absence of symptoms and information on screening facilities were the most prevalent impediments to screening.

**Conclusion:** Despite high awareness, cervical cancer screening uptake among young women was low. Focused educational interventions and improved access to screening services are needed to convert awareness into preventive action....

**Keywords:** Cervical cancer, Pap smear, screening, awareness, young women, preventive health

### 1. INTRODUCTION

Cervical cancer is mostly preventable at early ages, but it remains to be a huge health burden in most developing nations. The accessibility of the simple and low-end screening procedures like the Pap smear provides a chance to detect and treat the disease at the early stages. The success of these programs however does not only rely on the availability of the services but also upon the willingness and ability of the women to avail the services provided [1-3].

The young women are an important population which should be targeted by preventive measures due to their early adopted health practices that may continue even later in life [4-6]. In spite of the fact that cervical cancer awareness has been growing over the last years, the coverage of

screening is suboptimal. Some do not know about screening guidelines and

others do not test because of misconceptions, social awkwardness or belief that they are not at risk [7-9].

It is important to know the factors that cause the gap between awareness and screening behavior to develop effective public health strategies. This study was therefore undertaken to explore awareness levels, screening practices, and the factors influencing preventive behavior among young women.

## 2. METHODOLOGY

### Study Design and Setting

This research was conducted in the form of a descriptive cross-sectional study in an effort to explore the association between awareness and screening behavior regarding cervical cancer among young women. The study occurred during a period of one year, January 2023 to January 2024 in two hospitals District Women Hospital MTI DIKHAN and Liaquat Memorial Hospital Kohat. The facilities are also the key referral centers in the region and have women in both urban and rural settings, hence offering a wide range of participants.

### Study Population and Sample Size

The target population included young females visiting the outpatient units of the chosen hospitals with routine gynecology consultations or minor health issues. The number of participants enrolled was 62, with the help of non-probability convenience sampling method. Females aged between 18-29 years that were willing to take part and were able to communicate in the Urdu or Pashto language were incorporated. The participants who had been diagnosed with cervical cancer before or were critically ill during the period when the data were gathered were excluded to prevent the bias associated with disease specific knowledge or changed health behavior.

### Data Collection Procedure

The data were collected by female trained investigators to guarantee confidentiality and comfort. Each participant was asked to sign a written informed consent after being informed about the purpose of the study. The interviews have been conducted in a confidential environment in the hospital premises to promote honesty. The sociodemographic characteristics, knowledge on cervical cancer, Pap smear screening awareness and personal screening practices were gathered using a structured questionnaire. Prior to the formal data collection, the questionnaire was pilot tested and reviewed by subject experts to make sure that the questionnaire was clear and relevant.

### Measurement of Variables

The level of knowledge was measured by a set of close-ended questions, which evaluated the minimal level of knowledge about cervical cancer, awareness of human papillomavirus as a risk factor, knowledge about Pap smear screening and knowledge of recommended screening age and frequency. One point was granted to each right answer and a total score was obtained per individual. According to the aggregate score, a median score was used as a cut-off to group the participants as having either sufficient or insufficient knowledge. The screening practice was evaluated by requesting the participants to answer whether they ever had a Pap smear and whether they adhered to some regular screening schedule.

### Ethical Considerations

Before data collection, ethical approval was obtained by the authorities on institutional review. The participation was fully voluntary and a participant was informed about his/her right to drop out at any point without any repercussions. All the information gathered was maintained in confidence and was only used in conducting research. To make the data collection forms anonymous, no personal identifiers were taken.

### Data Analysis

Statistical software was used to enter and analyze the data. The demographic characteristic, level of knowledge and screening practices were summarized through descriptive statistics. Categorical variables were calculated in terms of frequencies and percentages. The chi-square was used to determine the association between the level of knowledge and screening practice and p-value of less than 0.05 was taken to be considered statistically significant.

## RESULTS

This study involved 62 young women whose average age was  $22.6 \pm 2.4$  Years. Majority of the respondents were students who were in urban areas and were at least of undergraduate education. Despite the general awareness on cervical cancer, there was evident disparity between knowledge and actual screening practice.

**Table 1: Sociodemographic Characteristics of Participants (n = 62)**

Variable	Category	n (%)
Age group (years)	18–20	21 (33.9)
	21–23	23 (37.1)
	24–26	11 (17.7)
	27–29	7 (11.3)
Residence	Urban	44 (71.0)
	Rural	18 (29.0)
Marital status	Unmarried	49 (79.0)
	Married	13 (21.0)
Education	Undergraduate	38 (61.3)
	Postgraduate	24 (38.7)

Over 90 per cent had heard about cervical cancer, and almost two-fifths of those interviewed had heard about the Pap smear as a screening test. There was a significant decrease in the level of knowledge about HPV as an agent and schedule of the screening. This disproportional representation of knowledge indicated that a good number of respondents had partial or partial knowledge.

**Table 2: Knowledge Regarding Cervical Cancer and Screening (n = 62)**

Knowledge Item	Correct Response n (%)
Heard of cervical cancer	56 (90.3)
Knows Pap smear is a screening test	49 (79.0)
Aware of HPV as a cause	31 (50.0)
Knows recommended screening age	18 (29.0)
Knows screening frequency	14 (22.6)

Although there was a comparatively high level of awareness, the number of those who had ever experienced a Pap smear was very low. The percentage of those who attended regular screening schedules was low, and a majority indicated that they would think about screening in future. This implies a huge gap in time between recognition and real preventive measure.

**Table 3: Screening Practices (n = 62)**

Practice Variable	Yes n (%)	No n (%)
Ever had Pap smear	11 (17.7)	51 (82.3)
Regular screening	6 (9.7)	56 (90.3)
Willing to screen in future	43 (69.4)	19 (30.6)

In women who had never undergone the screening, the most significant cause was the assumption that screening was not needed when there were no symptoms. The lack of information concerning the screening facilities and embarrassment were also commonly cited. Financial limitations were not as frequently mentioned but had an effect on a significant proportion of people.

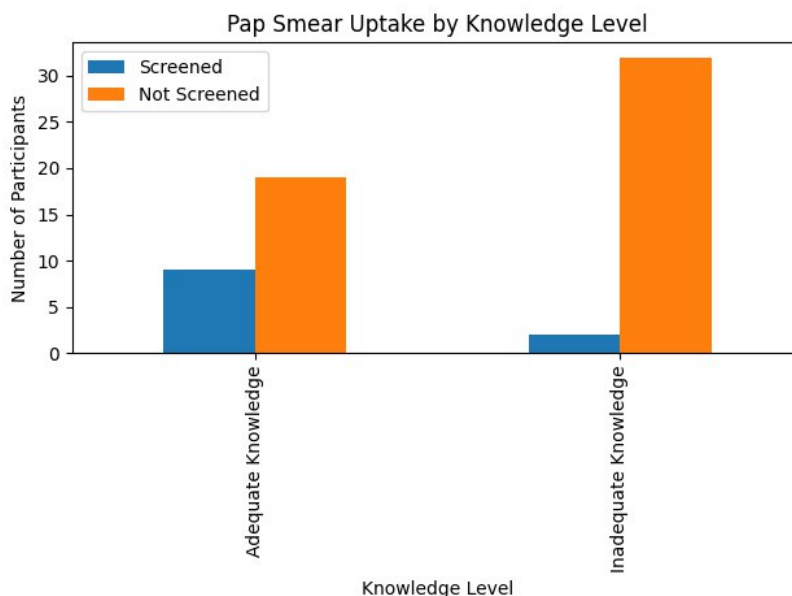
**Table 4: Barriers to Screening (n = 51)**

Barrier	n (%)
No symptoms / feel healthy	22 (43.1)
Lack of awareness of where to screen	15 (29.4)
Embarrassment / fear	8 (15.7)
Financial constraints	6 (11.8)

In participants who had sufficient knowledge, uptake of Pap smear screening was significantly higher in comparison to participants who had insufficient knowledge. This correlation was statistically significant in the chi-square analysis. The result shows the greater significance of awareness as well as the clarity and completeness of information.

**Table 5: Association between Knowledge Level and Pap Smear Uptake**

Knowledge Level	Screened n (%)	Not Screened n (%)	Total	p-value
Adequate	9 (32.1)	19 (67.9)	28	<b>0.002</b>
Inadequate	2 (5.9)	32 (94.1)	34	



**Figure 1. Pap smear uptake by knowledge level among young women (n = 62).**

This bar chart illustrates the distribution of Pap smear screening uptake according to participants’ level of knowledge about cervical cancer and its prevention. Women with adequate knowledge demonstrated a higher screening uptake compared with those having inadequate knowledge, while non-screening was markedly more common in the inadequately informed group.

### 3. DISCUSSION

The association that was explored in this study was between awareness and real screening behavior of cervical cancer at two hospitals in District Women Hospital MTI DIKHAN and Liaquat Memorial Hospital Kohat. Even though the majority of the respondents had heard about cervical cancer and knew about Pap smear as a screening procedure, the number of people who had ever been screened was small. This result reveals a continuing knowledge-practice divide that there might also be a failure to cause meaningful behavior change, even in the presence of awareness [10-12].

The low screening uptake in the present research is in line with the results reported in other low- and middle-income environments, where cultural norms, low access to services and misconception about personal risk often serve as barriers to preventive care. The same trend has been reported by a number of studies conducted in the region which show that young women usually believe that cervical cancer screening is not necessary when they do not present with any symptoms. This image supports latent health-seeking and also causes early detection to be missed even in the patients who are generally

conscious of the disease [13-15].

Another interesting observation of the current study was the statistically significant relationship between sufficient knowledge and an increased screening uptake. Females that had superior knowledge on cervical cancer and screening protocols regarding screening were significantly more likely to attend Pap smear. Such association indicates that in the motivating action of preventive action depth and accuracy of knowledge as opposed to mere awareness are critical. The same associations were found in previous studies where structured health education packages and repeated counseling measures were suggested to enhance screening behavior when they are beyond general information and have covered the practical issues like screening schedules, availability of services and perceived discomfort [16-18].

Some of the barriers that have been found in this study such as the absence of symptoms, inadequate knowledge of screening facilities, and the feeling of embarrassment are symptomatic of challenges that have been well documented in the prevention of health services to women [19, 20]. The mentioned barriers highlight the necessity of culturally sensitive counseling, screening units run by female staff members, and apparent community-based awareness campaigns. Enhancement of hospital-based counseling and the introduction of cervical cancer education as a routine in gynecological visits can be a viable measure to implement in such a healthcare facility.

#### 4. CONCLUSION

Despite relatively high awareness of cervical cancer, screening uptake among young women in this study remained alarmingly low. Adequate knowledge was significantly associated with better screening practices, emphasizing the importance of focused and practical health education. There is a clear need for targeted educational strategies, improved accessibility of screening services, and culturally appropriate counseling to bridge the gap between awareness and action and to promote early detection of cervical cancer in this vulnerable age group.

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