

Awareness of Cervical Cancer Screening Amongst Pakistani Medical Students and Doctors; A Systematic Review

MOHAMMAD MUSTAFA FAROOQ KHAN¹, MUHAMMAD TALHA MUMTAZ², AMMAN AFREEN³, MALIHA ASLAM KHAN⁴, KHIZAR ALI CHAUDHARY⁵, MUHAMMAD UZAIR⁶

^{1,4,5,6}House Officer, Ghurki Trust Teaching Hospital, Lahore, Pakistan

²House Officer, Doctors Hospital, Lahore, Pakistan

³House Officer, Fatima Memorial Hospital, Lahore, Pakistan

Correspondence to: Mohammad Mustafa Farooq Khan, Email: mftkhan1@gmail.com, Cell: 0331-4224802

ABSTRACT

Background Cervical cancer screening is one of the most important public health interventions for cervical cancer prevention, yet awareness among Pakistani medical students and doctors is alarmingly low.

Objective: to provide an in-depth understanding of the awareness and attitudes of Pakistani medical students and doctors towards cervical cancer screening

Methodology: A systematic review of the literature was conducted, and qualitative and quantitative findings from studies conducted between January 2010 and June 2022 were synthesized.

Results: The research found that Pakistani medical students and doctors have limited knowledge of cervical cancer and cervical cancer screening and a generally negative attitude towards cervical cancer screening. The paper also identified numerous influencing factors that contribute to the low awareness and attitudes towards the screening, such as traditional cultural beliefs, lack of training and education, and limited access to health care services.

Conclusion, the research found a desperate need for interventions to raise awareness and to create an environment of acceptance and support for cervical cancer screening among Pakistani medical students and doctors.

Keywords: Cervical Cancer, Screening, Pakistani Medical Students and Doctors, Knowledge, Pap smear, Human Papilloma Virus (HPV)

INTRODUCTION

Cervical cancer is preventable and can be treated early with effective screening, emphasizing the importance of early diagnosis.¹ However, the awareness, knowledge, attitude, and Practices regarding cervical cancer and cervical cancer screening among Pakistani medical students and doctors are surprisingly low. In Pakistan, 70% of population report cancer in advance stages which leads to high mortality rate.^{2,3}

Cervical cancer is a major health problem that affects millions of women around the world and is the fourth most common cancer among women in Pakistan.⁴ A study conducted in south Punjab frequency of cervical cancer among women cancer was 24.8%. The incidence rate and prevalence is high among developing countries as compared to developed countries. It is the second gynecological cancer after ovarian cancer. Low knowledge among health providers and superficial handling of disease is increasing the mortality rate.^{2,4-6}

Recently Hafeez R et al., 2020 conducted a quasi-experimental study in Civil Hospital, Karachi, and Dow University of Health Sciences. In it health care professionals were trained the knowledge level was assessed before and after the intervention using 26 item self-made questionnaire was used. It showed that post interventions, mean score difference of practices and knowledge were statistically significant.⁷

Recent studies has documented that 68% of married female have somehow knowledge about 68%, and 32% have been informed about PAP smear test but mostly don't have the knowledge how it's been performed. Some the participants have also the information regarding sexually transmitted HPV and its vaccination.⁸ There are many risk factors that leads to cervical cancer but awareness can help in selecting the appropriate action. Like Human Papilloma Virus (HPV) is a major risk factor for cervical cancer but its vaccine is available, Similarly family history, Age at the time of first intercourse/Early marriage, contraceptives and multiple sex partner, etc. are other contributing risk factors.^{2,9-12}

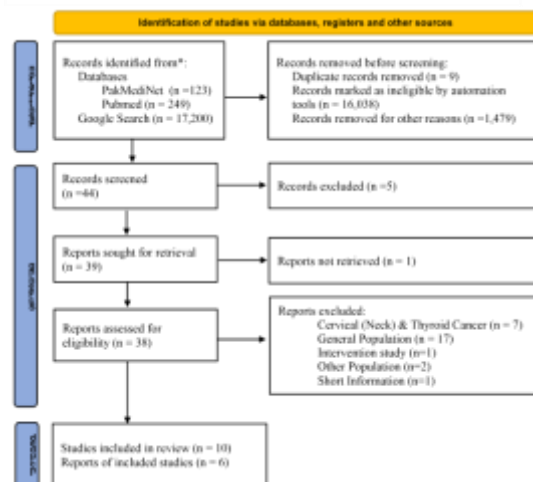
Papanicolaou (PAP) smear is conventionally screening procedure for diagnosis of cervical cancer. Misconceptions regarding procedures and reluctance due to its cost are contributing in low screening compliance. Recently a study conducted by Aslam S. et al 2018 in Services Institute of Medical Sciences showed that among Visual Inspection with Acetic Acid

(VIA) and Papanicolaou (PAP) smear as compared to gold standard cervical biopsy. Acetic Acid (VIA) showed better screening as compared to PAP smear with sensitivity of 97.67% and specificity of 84.29% with overall accuracy of 85.5%. Specificity could be increased by combing the PAP smear with VIA screening¹³

This research paper investigates the present level of awareness, attitude, and knowledge of Pakistani medical students and doctors towards cervical cancer screening, and identifies factors that influence their attitude to and uptake of cervical cancer screening. It is researcher's perception that a knowledge full Health professional can emphasize and educate the patients more effectively, as also suggested by literature.

METHODOLOGY

A comprehensive search was conducted in PubMed/MEDLINE, Web of Science, Scopus, Google Scholar, and other relevant databases for reviews, original studies, and articles on the awareness, attitude and knowledge of Pakistani medical students and doctors towards cervical cancer screening.



This review covered studies published between January 2010 to June 2022 regarding cervical cancer screening as well as any reviews of existing research. Key words used with AND(*) bullion command for search were "Awareness", "Cervical Cancer", "Screening" and "Pakistan". After that medical professional studies were manually isolated.^{14, 15}

Pakistani medical students and doctors were found to have limited knowledge of cervical cancer and cervical cancer screening, and a generally negative attitude towards cervical cancer screening. Several influencing factors were identified, including: traditional cultural beliefs, lack of knowledge and training, religious influences, stigma, unavailability of health care services, and financial constrains

RESULT

After applying the inclusion/exclusion criteria, 5 cross sectional studies were included and reviewed. Results revealed that

Table 1: Descriptive comparison of different studies

Author	Sample Size	Awareness	Diagnosis	Availability of Screening Procedures	Prevention
Ali S. F. et al 2010 ⁵	400	93(23.25%)	164(41.00%)	37(9.25%)	104(26.00%)
Hasnat A., Aslam F., 2012 ¹	200	97(48.50%)	5(2.50%)	3(1.50%)	2(1.00%)
Zaheer R. et al., 2017 ¹⁰	1277	966(75.65%)	1008(78.94%)	554(43.38%)	660(51.68%)
Zaidi,N., Rahman,M. & Javaid,N. 2017 ¹⁶	173	38(21.97%)	61(35.26%)	11(6.36%)	137(79.19%)
Hafeez R., Perveen F. & Zafer S. 2018 ¹⁷	129	18(13.95%)	48(37.21%)	24(18.60%)	69(53.49%)
Khan et al., 2021 ¹⁸	491	325(66.19%)	307(62.53%)		

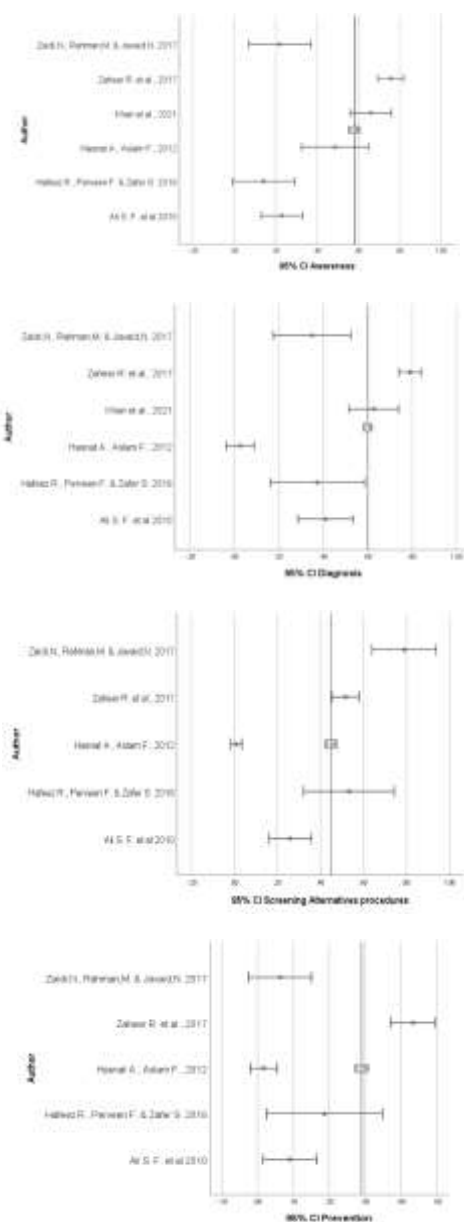


Figure 1: Comparison of different domains

In the current study it was observed that overall Awareness of cervical cancer, including knowledge about risk factors and symptoms, was in 57.57% (95% Confidence interval 55.69% to 59.44%) of the medical students and professionals. Similarly knowledge regarding diagnosis was also good i.e. 59.66% (95% of confidence interval 57.80% to 61.52%). Awareness regarding availability of different screening procedures, like PAP smear, VIA, Biopsy, Ultrasound, was low i.e. 28.87% (95% Confidence interval 27.15% to 30.59%) of the medical students have good awareness level (Figure 1)

Diverse response was observed regarding risk factors of cervical cancer. Regarding Human papilloma virus (HPV) as a major risk factor the response in affirmation was between 14%¹⁷ to 61%¹⁵. Whereas the response regarding availability of vaccine ranges between 56.5%¹ to 63%¹⁵

Similarly the knowledge regarding common symptoms, like Abnormal vaginal discharge, bleeding between periods and Pain in lower abdomen etc. ranges from 8.5%¹⁷ to 57%¹⁶

In depth response regarding beneficence of Pap smear were ranged between 37.2%¹⁷ to 75%¹⁵. The variation in the documented results leads to conclude that the awareness level is very poor and practices are lacking among general health services. (Table 1)

DISCUSSION

This research paper provides an overview of the awareness, attitude, and knowledge of Pakistani medical students and doctors towards cervical cancer screening. The findings show that Pakistani medical students and doctors have limited knowledge of cervical cancer and cervical cancer screening, and a generally negative attitude towards cervical cancer screening. The underlying factors identified in this paper, such as traditional cultural beliefs, lack of education, and limited access to healthcare further contribute to this lack of awareness and attitude. It is critical to address these barriers in order to effectively reduce the burden of cervical cancer in Pakistan.

In Pakistan there are many contributory factors hindering in screening. It may be due to lack of knowledge and unawareness of dangerous effects as well as low socioeconomic status has its own contribution. Due to cultural construct female feel shy to discuss with others.¹⁹ A study conducted in Khalifa bin Zayed Hospital, Rawalakot, Azad Kashmir, Pakistan revealed that more than half of the participants feel embarrassing to undergo cervical cancer screening. But on providing free of cost PAP smear test most of the female agreed for examination.²⁰ But it could be observed that cost is not a major contributing barrier in cervical cancer screening as compared low awareness level, misconception regarding need for testing and family trends of not getting cervical screening.^{9, 21}

A study documented that in low socioeconomic population only 13.3% have awareness regarding HPV as cause of cervical cancer and among them only 1.10% have history of examined through PAP smear due to the reasons discussed earlier¹⁰ the alternate to PAP smear has been introduced in the field. Visual examination with acetic acid has been recognized as a good screening tool for cervical cancer with high sensitivity and specificity. It is cost-effective, feasible and easily to perform.^{1,22}

Similarly a literature reveals that female have more awareness of availability of HPV vaccine as compared to males. But female have some misconceptions.²³ Another study assess the knowledge using modified version of Cervical Cancer Awareness Measure Toolkit version 2.1. Among high socioeconomic class reveals that the knowledge was higher but practices regarding prevention and screening of cervical cancer were poor.²⁴

Thus the study results showed that Pakistani Population is getting aware of cervical cancer but still efforts from medical health professionals and Government are required to encourage the female. Proper workshops and seminars should be organized to aware Medical students and professionals as well as general public. Low awareness of Doctors and medical students is the barrier in transferring the knowledge to their patients.

CONCLUSION

The majority of Pakistani medical students and doctors are not adequately aware of cervical cancer or cervical cancer screening, and their attitudes towards cervical cancer screening are overwhelmingly negative. It is essential to address both the awareness and attitude barriers to effectively tackle the issue of cervical cancer in Pakistan. This will require improvements in education and training, health care coverage, and community engagement.

Suggestions for intervention and future research: There is an urgent need for interventions to raise awareness and guide health practices for cervical cancer screening among Pakistani medical students and doctors. Targeted health education interventions should be developed to educate and raise awareness about cervical cancer screening, its importance, available resources and services, and eliminate unfounded fears. In addition, stigma should be addressed through educational campaigns to reduce stigmas associated with cervical cancer and its screening. Further research is also needed to identify additional influencing factors and to develop more comprehensive and targeted interventions to reduce cervical cancer mortality in Pakistan.

REFERENCES

- Hasnat A, Aslam F. Knowledge, attitudes and practices among women towards cervical cancer and prevention: study of a rural community in the suburbs of Rawalpindi. *Pak J Public Health*. 2012;2(4):11-9.
- Batool S, Sajjad S, Malik H. Cervical cancer in Pakistan: A review. *J Pak Med Assoc*. 2017;67(7):1074-7.
- Bhurgri Y. Karachi cancer registry data--implications for the national cancer control program of Pakistan. *Asian Pac J Cancer Prev*. 2004;5(1):77-82.
- Tabassum S, Masood A, Khakwani M. Pattern of female gynecological malignancies in south Punjab Region of Pakistan: an overview of 5 years. *Professional Med J*. 2021;28(01):90-5.
- Ali SF, Ayub S, Manzoor NF, Azim S, Afif M, Akhtar N, et al. Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in Tertiary Care Hospitals in Karachi, Pakistan. *PloS one*. 2010;5(6):e11059.
- Batool SA, Sajjad S, Malik H. Cervical cancer in Pakistan: A review. *J Pak Med Assoc*. 2017;67(7):1074-7.
- Hafeez R, Perveen F, Zafar S, Hafeez A. Educational effect on knowledge, attitude and practice among registered nurses regarding cervical cancer, its prevention and screening in Karachi, Pakistan. *J Pak Med Assoc*. 2020;70(4):674-8.
- Hassan U. Cervical cancer awareness among females of reproductive age group. *Professional Med J*. 2019;26(06):987-92.
- Sadia H, Shahwani I. Risk factors of cervical cancer and role of primary healthcare providers regarding PAP smears counseling: Case control study. *Pak J Med Sci*. 2022;38(4):998-1003.
- Zaheer R, Alam N, Chaudary K, Hussain F, Herekar A, Nasir H, et al. Awareness about human papillomavirus as a cause of cervical cancer and its prevention in the undergraduate female students of Karachi. *J Pak Med Assoc*. 2017;67(1):27-32.
- Zainab W, Naz S, Munim S, Farhat H, Solangi A, Khalid N. Awareness regarding Cervical Cancer and Pap Smear Test as a Screening Tool among Married and Unmarried Females of Karachi. *J Bahria Uni Med Dental Coll*. 2019;9(3):227-31.
- Khan TM, Buksh MA, Rehman IU, Saleem A. Knowledge, attitudes, and perception towards human papillomavirus among university students in Pakistan. *Papillomavirus research (Amsterdam, Netherlands)*. 2016;2:122-7.
- Aslam S, Wasim A, Javed L, Wasim T. Visual Inspection with Acetic Acid -An Acceptable Option in Screening of Cervical Cancer. *Ann King Edward Med Uni*. 2018;24(3):879-83.
- Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *International journal of surgery*. 2021;88:105906.
- Farid G, Warraich NF, Iftikhar S. Digital information security management policy in academic libraries: A systematic review (2010–2022). *Journal of Information Science*. 2023;01655515231160026.
- Zaidi N, Rahman M, Javaid N. Awareness and Knowledge regarding Risk Factors and Common Symptoms of Cervical Cancer among Female Students of Rawalpindi. *Pak Armed Forces Med J*. 2017;67(4):630-4.
- Hafeez R, Perveen F, Zafer S. Knowledge, Attitude and Practice Pattern of Tertiary Care Hospitals Regarding Cervical Cancer, its Screening and Prevention. *J Dow Uni Health Sci*. 2018;12(1):24-8.
- Khan M, Zafar A, Muneer R, Siddiqui A, Zafar A. Knowledge, Attitude and Practices regarding Cervical Cancer and Human Papilloma Virus (HPV) Vaccination. *Pak J Med Dentistry*. 2021;10(2):94-100.
- Khan GJ, Naeem HS, Khan S, Jamshaid T, Sajid MI, Bashir I, et al. Understanding and responsiveness level about cervical cancer and its avoidance among young women of Pakistan. *Asian Pacific Journal of Cancer Prevention*. 2014;15(12):4877-83.
- Javaeed A, Shoukat S, Hina S, Hameed Z, Ghauri SK, Ahmed MM. Knowledge, Attitude, and Practices Related to Cervical Cancer Among Adult Women in Azad Kashmir: A Hospital-based Cross-sectional Study. *Cureus*. 2019;11(3):e4234.
- Sultana R, Hafeez M, Shafiq S. Awareness about cervical cancer in Pakistani women. *Pakistan Armed Forces Medical Journal*. 2019;69(1):21-5.
- Rajpar S, Memon F, Munawar R. Visual Inspection of the Cervix with Acetic Acid for Screening of Cervical Cancers. *Pak J Med Health Sci*. 2021;15(1):516-9.
- Shaikh MY, Hussaini MF, Narmeen M, Effendi R, Paryani NS, Ahmed A, et al. Knowledge, Attitude, and Barriers Towards Human Papillomavirus (HPV) Vaccination Among Youths of Karachi, Pakistan. *Cureus*. 2019;11(11):e6134.
- Hirani S, Khan S, Akram S, Virji SN, Shaikh PA, Naeem E, et al. Knowledge, awareness, and practices of cervical cancer, its risk factors, screening, and prevention among women in Karachi, Pakistan. *European journal of cancer prevention : the official journal of the European Cancer Prevention Organisation (ECP)*. 2021;30(1):97-102.