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Breaking the Silence: Risk Factors and Knowledge about cervical cancer among patients: A descriptive cross-sectional study

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Abstract

Cervical Cancer is the fourth frequent common cancer worldwide, affecting women's health. Reproductive behaviour and Lack of knowledge in combination with low socioeconomic status puts women at greater risk of cervical cancer. The most common factors of developing cervical cancer among women are poor socioeconomic status, human papillomavirus (HPV) infection, co-infections (HIV), early reproductive cycles and multiparty, low education level, hormonal-altered immune system, smoking, etc. Cervical cancer is a preventable disease, yet many women in Pakistan present at an advanced stage. This study examined the demographic risk factor, knowledge about cancer and screening practices of cervical cancer patients in Punjab interpreted through the Social Determinants of Health framework. A quantitative descriptive cross-sectional study was conducted by applying convenience sampling technique at three hospitals of the Pakistan Atomic Energy Commission in Multan, Lahore, and Faisalabad. Th data were collected from 352 patients through a semi-structured interview schedule. Majority of the patients were illiterate, housewives and from households earning less than 40,000 rupees a month. Seven in ten patients had married before the age of 18, and only 0.6% had prior knowledge of cervical cancer and 11.4% knew of a diagnostic test. The study found majority of patients (80.7%) were diagnosed at stage III or IV. The findings reflects educational, economic, gender-related, and health-system disadvantages among patients. Health professionals, Media, and non-governmental organizations should expand awareness about HPV vaccination, screening practices. Furthermore, policymakers should strengthen girls' education and rural access to care. Future studies should use comparison groups and test associations with stage at diagnosis.

Keywords: cervical cancer; health knowledge; social determinants of health; screening; Pakistan

Introduction

Cervical cancer becomes a major public health problem despite a large preventable disease through human papillomavirus (HPV) vaccination and screening practices (Noreen et al., 2025; World Health Organization, 2025). Cervical cancer is the fourth most common malignancy among women with estimated 660,000 new cases and 350,000 deaths reported in 2022.While, about 94% of these deaths occurred in low- and middle-income countries due to cervical cancer diagnosed at late stage (World Health Organization, 2023). HPV Vaccination and screening could substantially reduce the risk of cervical cancer in developing and underdeveloped countries (Brisson et al.,

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2020). In Asia, Cervical cancer accounts for a large share of gynecological malignancies, including cervical cancer form a substantial part of the workload of Pakistani tertiary hospitals (Wasim et al., 2021). In Pakistan, the International Agency for Research on Cancer in 2018 recorded 5,601 cervical cancer cases and 3,861 deaths.They examined the factors that contribute to the disease among women(Khurshid et al. (2022) . Social norms discourage many women from discussing reproductive health, shame and embarrassment, female healthcare providers and stigma keep them from screening practices.Pakistan is now introducing HPV vaccination, and community perceptions and health-system readiness are still being explored (Noreen et al., 2025). The major risk factors include multiple childbirths, closely spaced pregnancies, early sexual debut, multiple sexual partners, sexually transmitted infections, smoking, immune deficiency, and irregular check-ups (Batool et al.,2017; Khurshid et al.,2022). The Screening options include the Pap test, cervical cytology, visual inspection with acetic acid, and HPV testing, and high-resource countries have used the Pap smear effectively to reduce incidence ratio of cervical cancer. Previously, many Pakistani studies reviewed were conducted mainly in Karachi or Lahore and examined the women attending clinics or health professionals rather than patients already diagnosed with cancer (Ali et al., 2010). However, only few studies have described risk factors, knowledge, screening, and access to care among cervical cancer patients across several divisions of Punjab. This study addresses that gap among 352 patients in three divisions and interprets the findings through the lens of Social Determinants of Health framework.

Research objectives

1. To describe the Sociodemographics and reproductive risk factors of cervical cancer among patients in Punjab.
2. To assess patients' prior knowledge of cervical cancer, HPV vaccination, and screening practices.

Literature Review

Mortality ratio due to cervical cancer is high because of limited knowledge of screening, prevention, and vaccination in low-income countries . Sadia et al. (2022) reported that about 70% of women consult a physician only at an advanced stage because of ignorance of screening, fear, embarrassment, shame, treatment cost.An International Agency for Research on Cancer recorded 5,601 cases and 3,861 deaths in Pakistan in 2018.Knowledge about cervical cancer and its prevention is low even among health professionals. In a survey of interns and nursing staff in Karachi Hospital, only 37 of 400 respondents knew of the HPV vaccine, 26% could name one or more risk factors, and 37% recognized the Pap smear as a screening test for cervical cancer prevention (Ali et al., 2010).likewise linked poor knowledge to the lack of screening and vaccination, and noted that social prohibition on discussing sex and sexually transmitted infections hampers research on HPV in Pakistan.The cost of the Pap smear affects women decision for early diagnosis and suggested that healthcare providers should have an important role in examination, counselling, and raising awareness(Sadia et al.,2022). Poor socioeconomic status, low education, early marriage and early reproductive cycles, multiparity, early sexual intercourse, smoking, oral contraceptive use, and HPV infection as the main risk factors of cervical cancer in Pakistan. Another study found that high-risk HPV was found in 14.2% of the women tested and was

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associated with younger age, single status, current smoking, hormonal contraceptive use, lifetime deliveries and sexual partners in the Northwest Territories of Canada (Benlghazi et al., 2023). The above studies were mainly conducted in Karachi and examine health professionals, women attending clinics, or case-control samples. However, only few researches describe the characteristics, knowledge, and access to care of patients who already have cervical cancer especially across several divisions of Punjab.

Theoretical Framework

The Social Determinants of Health perspective explains how the social, economic, political, and environmental conditions in which people are born, grow, live, work, and age shape health and well-being of people. In 2005, the World Health Organization established the Commission on Social Determinants of Health to address global health inequities which identifies poverty, education, employment, housing, nutrition, gender inequality, access to health care, and social support as major influences on physical and mental health of individuals. Income, employment, and financial security affect access to nutritious food, health services, safe housing, and transport, and financial hardship often leads people to delay care. It shifts attention from treating disease alone to addressing its social causes of cervical cancer because socioeconomic status, access to care, beliefs, awareness, and gender inequality affects health of community. Poor and rural women are often denied access to screening and HPV vaccination, diagnosed later, and lack adequate treatment facilities(Brisson et al.,2020). Limited education reduces awareness of symptoms and prevention of disease. Gender norms restrict open discussion of reproductive health, and the lack of health facilities compounds difficulties for rural populations. Stigma and low awareness further delay care, so cervical cancer is not only a medical problem but also a social and economic one for patients and their families.

Research Methodolgy

This study applied quantitative research design in accordance with the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines for cross-sectional studies in research (von Elm et al., 2007). The Data were collected at a single point in time to describe the sociodemographic risk factors of cervical cancer and disease knowledge among diagnosed patients. The study was conducted in three main divisions of Punjab Province: Multan, Lahore, and Faisalabad for data collection. The Data were collected from three cancer hospitals working under the Pakistan Atomic Energy Commission: the Multan Institute of Nuclear Medicine and Radiotherapy, the Institute of Nuclear Medicine and Oncology Lahore (INMOL), and the Punjab Institute of Nuclear Medicine. These tertiary centers were selected because they provide specialized oncology services to patients including rural areas.

Study population and Sampling

The study population comprised women diagnosed with cervical cancer who were receiving diagnostic, treatment, or follow-up services at the selected hospitals. Eligible participants were women aged 18 years or older with confirmed diagnosis of cervical cancer, Patients who were critically ill, cognitively impaired and were unwilling to participate were excluded. A Convenient sampling technique was applied to collect data from eligible patients who attended the three

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hospitals during the data collection period and agreed to participate. A total of 352 patients were selected by using G power software, comprising 150 from MINAR, 150 from INMOL, and 52 from PINUM. The Data were collected through a semi-structured interview schedule and instrument comprised sociodemographic characteristics (age, marital status, number of wives of the husband, education, occupation, household income, residence, and distance from the hospital); reproductive and clinical risk factors (age at marriage, age at first pregnancy, multiple childbirths, multiple sexual partners, smoking, obesity, nutritional deficiency, family history of cancer, genital hygiene, and stage at diagnosis, knowledge of cervical cancer (symptoms, risk factors, HPV, vaccination, diagnostic tests and screening practices. The content validity of the interview schedule was established through review by experts in sociology, public health, and oncology. The instrument was pilot tested on 20 patients who were not included in the final sample, and ambiguous items were revised. After obtaining permission from the hospital administrations, the researcher approached eligible patients, explained the purpose of the study, and Interviews were conducted privately in outpatient department/waiting area. The Data were coded and analyzed using SPSS version 23. Descriptive statistics (frequencies and percentages) summarized the sociodemographic characteristics, risk factors, knowledge, screening practices, and stage at diagnosis.

Table 1

Domain	Study Variable
Economic stability	Low socioeconomic status in the community; nutritional deficiency
Education and health literacy	Prior knowledge of cervical cancer; knowledge of diagnostic tests; HPV vaccination
Gender norms and social context	Early marriage (before 18 years); multiple childbirths; multiple sexual partners
Access to health care	Screening practices (HPV test, Pap test); distance from the hospital
Health behaviors and hygiene	Smoking; washing genitals after sexual intercourse
Biological and family factors	Obesity; family history of cervical or other cancer

Results and Discussion

Table 2: Sociodemographic Characteristics of respondent

Variable	Category	f	%
Age (years)	20-29	5	1.4
	30–39	35	9.9
	40–49	169	48.0
	50–59	89	25.3
	Over 60	54	15.3
Marital status	Married	204	58.7
	Widowed	77	22.6
	Divorced	38	9.4

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	Separated	33	9.4
Education	Illiterate	202	56.1
	Primary	88	26.3
	Matriculation	33	9.4
	Intermediate	22	5.5
	Bachelor's/Master's	7	2.7
Occupation	Housewife	278	78.3
	Farmer	33	9.3
	Government employee	21	5.7
	Daily laborer	20	5.7
Monthly Income	<20,000	77	21.9
	20,000–40,000	167	47.4
	40,000–60,000	88	25.0
	>60,000	20	5.7
Residence	Rural	272	77.2
	Urban	80	22.7
Age at marriage	<18	251	71.3
	18–20	34	9.7
	20–22	24	6.8
	22–24	22	6.3

The demographic characteristics of patients revealed that mostly respondents were illiterate or had only primary education, and majority were housewives living in rural areas in households earning less than 40,000 rupees a month and socially disadvantaged. While, nearly three-quarters were aged 40 to 59 years, most were Over two-fifths were widowed, divorced, or separated, and about one-quarter reported that their husband had more than one wife. Majority patients had married status and become pregnant early.

Risk Factors of Cervical Cancer among Patients

Item	f (%) Yes	f (%) No
Prior knowledge of cervical cancer	3 (0.7)	349 (99.1)
Received HPV vaccine	1 (0.3)	351 (99.7)
Multiple sexual partners	10 (2.8)	342 (97.2)
Early marriage (before 18 years of age)	251 (71.3)	101 (28.7)
Multiple childbirths after marriage	255 (72.4)	97 (27.6)
Smoking	32 (9.1)	320 (90.9)
Obesity	121 (34.4)	231 (65.6)
Nutritional deficiency	289 (82.1)	63 (17.9)
Low socioeconomic status in community	305 (86.6)	47 (13.4)
Family history of cervical or any other cancer	108 (31.4)	244 (68.6)
Washing genitals after sexual intercourse	117 (33.2)	235 (66.8)

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Note. f = frequency; **HPV** = human papillomavirus.

The findings of study revealed that majority of patients (99%) lacked prior knowledge of cervical cancer and had never received the HPV vaccine. While, more than 70% of the patient's reported Low socioeconomic status, nutritional deficiency, multiple childbirths, and early marriage. Similarly, many other study revealed that None of 90 women was familiar with cervical cancer disease (Nisar & Naseem, 2026) and 41.2% of 226 gynecology outpatients had prior Knowledge about cervical cancer (Shamaun et al., 2022)

Knowledge about diagnosis test, screening, distance and Stage

Item	Category	f	%
Diagnosis Stage	Stage I	35	9.9
	Stage II	33	9.4
	Stage III	155	44.0
	Stage IV	129	36.6
Knowledge of diagnostic test	Yes	40	11.4
	No	312	88.6
Screening practices	HPV test	13	3.7
	Pap test	6	1.7
	None	333	94.6
Distance to the hospital	Less than 1 hour	49	13.9
	1–3 hours	84	23.9
	3–5 hours	132	37.5
	More than 5 hours	87	24.7

The findings of study indicate that about four in five patients (80.7%) were diagnosed at advance stage III or IV and only one in ten were diagnosed stage I. However, only few patients (11.4%) knew of a diagnostic test, almost none (94%) reported screening before diagnosis.

Discussion

Cervical cancer patients in Punjab carried a heavy burden of social and reproductive risk factors and had no knowledge of the disease or its prevention strategies before diagnosis. This study findings revealed that poverty, early marriage, repeated childbirth, poor health literacy, and distance from healthcare Hospital affects the women. Lack of knowledge (99.4%) and vaccination (99.7%) is the most striking result. Although, awareness of the HPV vaccine was equally poor (1.8%) and 96.9% could not name any risk factor. These results are relevant to another to another study where no woman in a Lahore sample was familiar with cervical cancer or HPV (Nisar and Naseem,2026). Even health professionals' studies revealed that only 37 of 400 interns and nurses in Karachi knew about the HPV vaccine to prevent from cancer (Ali et al., 2010). This is consistent with Batool et al. (2017), who attributed Pakistan's high mortality to limited knowledge of screening, prevention, and vaccination. In Social Determinants of Health terms, this is an education and health literacy gap with 57.1% of our patient's illiterate, most women had little means of learning about prevention strategies.

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Gender norms and social context: reproductive and sexual factors

The findings of study indicate that early marriage (71.3%) and multiple childbirths (72.4%) were common, in line with the Pakistani literature that repeatedly identifies early reproductive cycles, multiparity, and early sexual exposure as risk factors (Sadia et al., 2022). . Most patients (88.6%) were aged above 40 years which is consistent with development of cervical cancer after exposure and makes screening in earlier years the main opportunity for prevention. Seven in ten (71.3%) had married before 18, and nearly half (48.0%) had their first pregnancy before age 20, with 77.6% pregnant before age 25. Low socioeconomic status (86.6%) and nutritional deficiency (82.1%) were the leading risk factors of developing cervical cancer among study population. This agrees with the Pakistani review evidence that poor socioeconomic status is among the main correlates of cervical cancer (Batool et al., 2017) and with the 62.2% of low-income women reported by Nisar and Naseem (2026).

Health behaviors, hygiene, and biological factors

In this study, Smoking was uncommon (9.1%), similar to the 6.7% reported by Nisar and Naseem (2026).Smoking appears to play a smaller role in this population, where few women smoke. A family history of cancer (30.4%) is consistent with Sadia et al. (2022), who found family history among the significant predictors in their case-control analysis. Finally, two-thirds of patients (66.8%) did not wash after intercourse. Direct evidence that genital washing prevents cervical cancer is limited, so we interpret this item as an indicator of health literacy and access to water and sanitation not as a causal factor. Furthermore, Smoking, obesity, and family history belong to the health behavior and biological domains, which appear less central here than the social and economic factors.Travel distance adds to this disadvantage: 62.2% of patients lived more than three hours from the hospital, and 24.7% lived more than five hours away.

Strengths and limitations of Study

This study reached 352 patients across three divisions of Punjab, which is larger than several of the hospital-based Pakistani studies. The limitation of study were cross-sectional design cannot establish causality and associations between stage at diagnosis and the other variables were not tested.

Conclusion

The study concluded that among 352 cervical cancer patients in Punjab, 80.7% presented at stage III or IV, and knowledge of the disease (0.6%), knowledge of diagnostic tests (11.4%), HPV vaccination (0.3%), and screening (5.4%) were almost absent. However,62.2% lived more than three hours from the hospital, while low socioeconomic status (86.6%), nutritional deficiency (82.1%), multiple childbirths (72.4%), and early marriage (71.3%) were significant in this study. These results support the Social Determinants of Health view that cervical cancer in this population reflects deprivation, gender norms, and limited health literacy as much as individual biology. Prevention will need to combine health education and vaccination with changes in the social conditions that keep women away from screening and care practices.

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Recommendations

Health professionals, media, and non-governmental organizations should run culturally sensitive campaigns on symptoms, risk factors, screening, and HPV vaccination, using female health workers and community and religious leaders to reach rural and low-literacy women. Vaccination of girls before marriage should be sustained and monitored within the national immunization program, with outreach to out-of-school**.** Pap smear, visual inspection, or HPV testing should be offered at primary care level and in district hospitals, with female providers and low or no cost to the patient**.** Policymakers should strengthen girls' education, discourage marriage before 18, support birth spacing, and link poor households to nutrition and social protection programs. Further studies should use comparison groups, examine whether stage at diagnosis is associated with knowledge, screening, and distance, include male partners' behavior, and test the associations reported here with inferential statistics.

References

1. Ali, S. F., Ayub, S., Manzoor, N. F., Azim, S., Afif, M., Akhtar, N., Jafery, W. A., Tahir, I., Farid-ul-Hasnian, S., & Uddin, N. (2010). Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in tertiary care hospitals in Karachi, Pakistan. *PLOS ONE, 5*(6), Article e11059.
2. Batool, S. A., Sajjad, S., & Malik, H. (2017). Cervical cancer in Pakistan: A review. *Journal of the Pakistan Medical Association, 67*(7), 1074–1077.
3. Benlghazi, A., Belouad, M., El-Agouri, H., Benali, S., Hassani, M. E., & Kouach, J. (2023). Cervical cancer mimicking cervical myoma a rare clinical situation. International Journal of Scientific Reports, 9(7), 227–229. https://doi.org/10.18203/issn.2454-2156.intjscirep20231804
4. Brassard, P., Jiang, Y., Severini, A., Goleski, V., Santos, M., Chatwood, S., Lys, C., Johnson, G., Wong, T., Kotaska, A., Kandola, K., Morrison, H., & Mao, Y. (2012). Factors associated with human papillomavirus infection among women in the Northwest Territories. *Canadian Journal of Public Health, 103*(4), e
5. Brisson, M., Kim, J. J., Canfell, K., Drolet, M., Gingras, G., Burger, E. A., Martin, D., Simms, K. T., Bénard, É., Boily, M.-C., Sy, S., Regan, C., Keane, A., Caruana, M., Nguyen, D. T. N., Smith, M. A., Laprise, J.-F., Jit, M., Alary, M., … Hutubessy, R. (2020). Impact of HPV vaccination and cervical screening on cervical cancer elimination: A comparative modelling analysis in 78 low-income and lower-middle-income countries. *The Lancet, 395*(10224), 575–590. https://doi.org/10.1016/S0140-6736(20)30068-4
6. Daniyal, M., Akhtar, N., Ahmad, S., Fatima, U., Akram, M., & Asif, H. M. (2015). Update knowledge on cervical cancer incidence and prevalence in Asia. *Asian Pacific Journal of Cancer Prevention, 16*(9), 3617–3620. https://doi.org/10.7314/APJCP.2015.16.9.3617
7. Khurshid, Z., Abdullahi, K. O., Parveen, K., & Khan, S. (2022). Factors contributing to cervical cancer among women: A systematic review and meta-analysis. *Pakistan BioMedical Journal, 5*(8). https://doi.org/10.54393/pbmj.v5i8.675
8. Nisar, B., & Naseem, N. (2026). A comprehensive assessment of cervical cancer risk factors, screening modalities, and cytological outcomes. *Journal of the Pakistan Medical Association, 76*(9), 1505–1509. https://doi.org/10.47391/JPMA.31401

Online ISSN: 3006-8886
Print ISSN: 3006-8878

9. Noreen, K., Khalid, S. N., Javaid, M., & Khan, S. A. (2025). Public health implications of introducing human papillomavirus (HPV) vaccination in Pakistan: A protocol for a mixed-method study to explore community perceptions and health system preparedness. *PLOS ONE, 20*(5), Article e0323826. https://doi.org/10.1371/journal.pone.0323826
10. Sadia, H., Shahwani, I. M., & Bana, K. F. M. A. (2022). Risk factors of cervical cancer and role of primary healthcare providers regarding PAP smears counseling: Case control study. *Pakistan Journal of Medical Sciences, 38*(4). https://doi.org/10.12669/pjms.38.4.4969
11. Shamaun, S., Jaleel, R., Gull, Y., Shahid, A., Iqbal, M., & Qazi, T. N. (2023). Knowledge and attitude of cervical cancer screening and vaccination in patients attending gynecology outpatient clinic at a tertiary care hospital in Pakistan. *South Asian Journal of Cancer, 12*(1), 17–22. https://doi.org/10.1055/s-0042-1751093
12. Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *The Lancet, 370*(9596), 1453–1457. https://doi.org/10.1016/S0140-6736(07)61602-X
13. Wasim, T., Mushtaq, J., Wasim, A. Z., & Raana, G. e. (2021). Gynecological malignancies at tertiary care hospital, Pakistan: A five-year review. *Pakistan Journal of Medical Sciences, 37*(3). https://doi.org/10.12669/PJMS.37.3.3596
14. World Health Organization. (2023). Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2021 global survey. World Health Organization.
15. World Health Organization. (2025). Cervical cancer. https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-%28hpv%29-and-cervical-cance