SRMS IMS

10.21761/jms.v10iSuppl.10

ORIGINAL RESEARCH ARTICLE

Awareness, Attitudes, and Barriers Towards Cancer Screening: A Cross-Sectional Survey

Maneeti Manya[1], Himanshi Khattar[2*], Piyush Kumar[3]

ABSTRACT

Introduction: Cancer screening is an essential tool in the early detection and prevention of malignancies. It improves survival outcomes and reduces the treatment burden by identifying cancer in its early stages. Despite its benefits, participation in cancer screening remains low in many populations. This study aimed to assess the awareness, attitudes, and barriers to cancer screening among patients attending a tertiary care hospital.

Material and Methods: A cross-sectional survey was conducted over a three-month period in the outpatient department of a tertiary care hospital. About 50 adult participants were recruited using convenience sampling. Data were collected using a structured, pre-validated questionnaire that included demographic details, awareness of cancer screening, and barriers to participation. Descriptive statistics were used to analyze the data.

Results: Only 6% of participants had undergone cancer screening despite 82 to 86% acknowledging the importance of early detection. Head and neck cancer was the most reported type (40%). Knowledge about specific screening procedures was low (6%). Major barriers included the belief of being healthy (74%), fear of diagnosis (28%), and distance to the screening center (28%).

Conclusion: Although general awareness of the benefits of cancer screening was high, actual screening rates were significantly low. The findings suggest that psychological barriers and accessibility issues are the primary obstacles to progress. Efforts to increase screening uptake should focus on education, community-based services, and reducing systemic barriers.

Keywords: Cancer screening, Barriers, Awareness

How to cite this article: Manya M, Khattar H, Kumar P. Awareness, Attitudes, and Barriers Towards Cancer Screening: A Cross-Sectional Survey. SRMS J Med Sci. 2025;10(Suppl1):S44-S46.

Source of support: Nil

Conflict of interest: None

Submission: 17-04-2025; **Acceptance:** 18-05-2025; **Published:** 30-06-2025

Undergraduate (MBBS)[1], Assistant Professor[2], Professor[3]

Department of Radiation Oncology, Shri Ram Murti Institute of Medical Sciences, Bareilly, Uttar Pradesh, India.

***Corresponding Author:** Himanshi Khattar, Assistant Professor, Department of Radiation Oncology, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India. e-mail: hk301294@gmail.com

INTRODUCTION

Cancer is a major public health burden globally. According to the World Health Organization, nearly 10 million deaths were attributed to cancer in 2020 alone.[1] Screening is widely recognized as a powerful tool for early detection and prevention, significantly improving patient prognosis and reducing treatment costs.[2] However, despite its proven efficacy, cancer screening uptake remains low, particularly in low- and middle-income countries (LMICs).[3,4]

Multiple barriers hinder the widespread adoption of screening, including psychosocial fears, cultural stigma, lack of awareness, financial constraints, and logistical challenges.[5,6] Studies in India highlight gaps in public knowledge, attitudes, and access to screening services, contributing to delayed diagnosis and higher mortality rates.[7-9]

This study was conducted to assess awareness levels, attitudes, and the reasons for non-participation in cancer screening in a hospital-based population. The goal is to identify actionable barriers and inform targeted health interventions to address these issues.

MATERIAL AND METHODS

Study Design and Participants

This was a cross-sectional study conducted in the outpatient department of a tertiary care hospital over 3 months. A convenience sample of 50 adult participants (age ≥ 20 years) was surveyed. Individuals with diagnosed cancer, their accompanying family members, and general patients attending the OPD were included. Critically ill patients and those unwilling to provide consent were excluded.

Data Collection Tool

A structured questionnaire, pre-tested and validated using literature-informed questions,[4,6] was used. It consisted of four domains: demographics, cancer type, awareness and attitudes toward cancer screening, and barriers categorized as psychosocial, cultural/financial, or healthcare-related. Data collection was done *via* face-to-face interviews.

Ethical Considerations

Ethical clearance was obtained from the institutional ethics board. Written informed consent was collected from all participants.

Data Analysis

Responses were analyzed using descriptive statistics. Data were entered into Microsoft Excel, and categorical variables were presented as frequencies and percentages.

RESULTS

The survey revealed critical insights into the cancer screening behavior, demographics, and knowledge base of the participants. Only 6% of respondents had previously undergone cancer screening, indicating a substantial gap in participation. The age distribution (Table 1) showed that most participants were between 40 and 59 years old, the typical age range for recommended screening, making the low screening rate particularly concerning.

When asked about the types of cancer they or their relatives had experienced (Table 1), the most frequently reported was head and neck cancer (90%), followed by breast (40.9%) and cervical (18.1%) cancers. These are cancers with available screening protocols, suggesting an opportunity for targeted education.

Knowledge about cancer screening was mixed (Table 2). While a high percentage acknowledged the benefits of early detection (82–86%), only 6% actually understood what cancer screening entailed.

Participants were asked which types of cancers they believed were screenable (Table 3). Lung, blood, and colon cancers were among the most frequently identified, with over 90% recognition. Breast cancer, despite its high incidence and availability of screening methods, was perceived as screenable by only 86%, indicating areas for improved awareness.

Barriers to screening were categorized and tabulated in Table 4. Psychosocial and individual barriers were dominant, especially the perception of good health (74%) and fear of diagnosis (28%). Cultural and financial barriers such as embarrassment and financial difficulty were cited by fewer participants (8–10%), suggesting that psychological and systemic factors may be more influential. Notably, 28% indicated that distance to the screening center was a deterrent, highlighting infrastructure and accessibility as key challenges.

The majority of the patients (94%) did not undergo any screening test before diagnosis. Only 6% of the patients underwent screening test.

Table 1: Patient characteristics

Age	*Number of patients*
20–29	1
30–39	5
40–49	13
50–59	15
60–69	9
70–79	6
80–89	1
Gender	N (%)
Male	27 (54%)
Female	23 (46%)
Type of cancer	N (%)
Head and neck	20 (90%)
Breast	9 (40.9%)
Cervical	4 (18.1%)
Lung	3 (13.6%)
Prostate	2 (9.09%)
Gall bladder	2 (9.09%)
Blood	2 (9.09%)
Colon	2 (9.09%)
Ovarian	2 (9.09%)
CBD	1 (4.5%)
Brain	1 (4.5%)
Bladder	1 (4.5%)
Bone	1 (4.5%)

DISCUSSION

The findings highlight a significant disparity between awareness of cancer screening benefits and actual participation. Despite 82–86% of participants acknowledging the value of early detection, only 6% had undergone screening. This aligns with global evidence indicating that knowledge does not automatically lead to behavioral change.[3,4] This highlights a critical educational gap that could be addressed through structured awareness programs.

Psychosocial barriers were the most significant, with 74% avoiding screening because they "felt healthy." This misconception is well-documented in studies from low- and middle-income countries (LMICs) where health education is limited.[7] Fear of diagnosis and procedural anxiety were also major concerns, mirroring data from Marlow *et al*. and Jones *et al*.,[3,4]

Healthcare system limitations, especially the distance to screening centers (28%) and mistrust in providers (12%), further reduced participation. These systemic issues require structural health policy reforms, such as mobile clinics and community-based health outreach.[5]

Interestingly, cultural and financial concerns were relatively low, suggesting the potential for behavioral interventions without substantial economic barriers in this population. Education campaigns and engagement through local health workers could help bridge the awareness-to-action gap.

Table 2: Knowledge of cancer screening

Statement	*Yes (%)*	*No (%)*
Know what screening is	6	94
Early detection helps	82	18
Early detection improves outcomes	86	14
Family history warrants screening	56	44
Some cancers are avoidable	82	18
Aware of screening benefits	56	44

Table 3: Perception of screenable cancers

Cancer type	*Perceived screenable (%)*
Lung	96
Blood	96
Colon	92
Prostate	92
Brain	92
Anal	92
Ovarian	92
Lymph node	92
Breast	86
Bone	86

Table 4: Barriers to screening

Psychosocial and individual factors		
Reason	*Yes (%)*	*No (%)*
Felt healthy, no need	74	26
Afraid of diagnosis	28	72
Afraid of procedure	24	76
Stigma	16	84
Belief cancer is incurable	12	88
Afraid of pain	14	86
Avoided due to waiting	4	96
No time for screening	12	88
Cultural and financial factors		
Reason	*Yes (%)*	*No (%)*
Embarrassed for screening	8	92
Family discouraged	0	100
Financial difficulty	10	90
Health system factors		
Reason	*Yes (%)*	*No (%)*
No trust in hospital/doctor	12	88
Screening center far	28	72

Although awareness of cancer screening is high, actual participation is exceedingly low. The key deterrents are rooted in misconceptions, fear, and logistical constraints. Future strategies must focus on education, community engagement, and decentralization of screening services.

CONCLUSION

Despite the proven benefits of early detection through cancer screening, multiple barriers continue to limit its uptake, particularly in low-resource settings and among underserved populations. Key obstacles include limited awareness and knowledge about screening guidelines, fear of diagnosis, cultural beliefs, financial constraints, and inadequate access to healthcare services. Systemic issues, such as a lack of organized screening programs, logistical difficulties, and insufficient recommendations from healthcare providers, further exacerbate the problem. Addressing these barriers requires a multifaceted approach involving targeted public health education, policy-level support, healthcare infrastructure improvements, and culturally sensitive interventions to promote equitable access and participation in cancer screening programs.

REFERENCES

1. World Health Organization. Cancer. 2020. Available from: https://www.who.int/news-room/fact-sheets/detail/cancer
2. American Cancer Society. Cancer Screening Guidelines. 2021.
3. Jones RM, Woolf SH, Cunningham TD, et al. Barriers to colorectal cancer screening: a qualitative study. *Patient Educ Couns*. 2010;75(3):385–391.
4. Marlow LAV, Waller J, Wardle J. Barriers to cervical cancer screening among ethnic minority women: a qualitative study. *J Fam Plann Reprod Health Care*. 2015;41(4):248–254.
5. Lofters AK, Moineddin R, Hwang SW, Glazier RH. Low rates of cervical cancer screening among urban immigrants: a population-based study in Ontario, *Canada. Med Care*. 2013;48(7):611–618.
6. Klabunde CN, Frame PS, Meadow A, et al. A national survey of primary care physicians' colorectal cancer screening recommendations and practices. *Prev Med*. 2005;41(2):479–487.
7. Denny L, Quinn M, Sankaranarayanan R. Chapter 8: Screening for cervical cancer in developing countries. *Vaccine*. 2006;24 Suppl 3:S3/71–S3/77.
8. Sankaranarayanan R, Ramadas K, Qiao YL. Managing the changing burden of cancer in Asia. *BMC Med*. 2014;12(1):3.
9. Paul P, Bhatnagar N, Singh A. Awareness of cancer screening—A population-based study in urban India. *Asian Pac J Cancer Prev*. 2020;21(1):23–29.