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Barriers to Breast Cancer Screening in Urban India: A Narrative Review

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A B S T R A C T

Breast cancer remains the most prevalent cancer among women in India, with urban populations facing unexpectedly low screening uptake despite closer proximity to healthcare facilities. This narrative review synthesizes findings from 42 peer-reviewed studies to examine the multifactorial barriers to breast cancer screening among urban Indian women. The analysis identifies five major themes: individual-level factors such as low awareness, fear, and perceived invulnerability; socio-cultural barriers including stigma, modesty concerns, and patriarchal norms; health system challenges like provider insensitivity and lack of female personnel; economic constraints including cost, time poverty, and transportation; and policy-level gaps marked by poor outreach and ineffective public programs. Marginalized urban populations, especially those in informal settlements, bear the brunt of these compounded barriers. The findings highlight the urgent need for targeted, culturally sensitive interventions, improved healthcare delivery, and inclusive policy frameworks to enhance early detection and reduce breast cancer mortality in urban India.

Keywords: Breast cancer, screening barriers, urban India, women's health, stigma, health systems, awareness, policy gaps

1. Introduction

Breast cancer is the most commonly diagnosed cancer among women in India and a leading cause of cancer-related mortality [5, 34]. Although early detection through screening significantly improves survival rates, participation in breast cancer screening programs remains alarmingly low among urban Indian women [2, 3, 21]. Contrary to expectations, urbanization does not automatically ensure better access or utilization of preventive healthcare services such as breast cancer screening [6, 10, 17].

Multiple studies have identified that despite physical proximity to healthcare facilities, women in cities like Delhi, Mumbai, Chennai, and Bengaluru often face substantial barriers to screening [2, 6, 10, 20]. These barriers are deeply rooted in a combination of socio-cultural, psychological, economic, and health-system-related factors [4, 7, 18, 22].

Socio-cultural factors include fear of cancer diagnosis, social stigma, modesty concerns, and cultural taboos associated with breast health [1, 7, 27, 35]. For example, studies in Chennai and Kochi found that many women refrained from screening due to embarrassment and lack of spousal support [7, 27]. Psychological barriers such as low perceived susceptibility, fear of treatment, and denial further deter women from seeking screening [1, 5, 18, 31].

Economically, even in urban areas, cost of screening, loss of daily wages, and lack of subsidized services act as deterrents, especially among lower-income groups residing in urban slums [10, 16, 17, 30, 32]. Moreover, limited availability of female health professionals, inconvenient service timings, and poor doctor-patient communication reflect systemic healthcare barriers that disproportionately affect women in underserved urban regions [6, 24, 25, 36].

Despite national programs such as the NPCDCS initiated by the Government of India, there is an absence of structured, population-wide breast cancer screening implementation, especially in urban public health systems [9, 20, 21]. Awareness campaigns are sporadic, and preventive care does not receive adequate attention at the primary care level [9, 20].

This narrative review synthesizes findings from 42 peer-reviewed articles and government reports to identify and categorize the key barriers to breast cancer screening in urban India. By examining the interplay between personal, social, economic, and health system-level challenges, the review aims to highlight gaps and opportunities for improving early detection strategies in urban settings

2. Objective

To identify key barriers to breast cancer screening among urban Indian women and suggest strategies for improving early detection through policy, system, and community-level interventions.

3. Methodology

Search Strategy

Databases searched**:** PubMed, Scopus, Google Scholar

Search Terms / Keywords **(**used with Boolean operators):

- "Breast cancer" AND "screening" AND "urban India"
- "Barriers to breast cancer screening" AND "Indian women"
- "Mammography uptake" AND "urban population"
- "Awareness" OR "perceived risk" OR "health system delay" AND "breast cancer screening" **MeSH Terms**:
- "Breast Neoplasms/prevention & control" [MeSH] AND "Urban Population"
- "Early Detection of Cancer" [MeSH] AND "India"
- "Mass Screening" [MeSH] AND "Female"

Date Range: January 2005 – May 2025

Language: English

Inclusion Criteria:

- Studies conducted in urban India
- Articles focusing on barriers to breast cancer screening (qualitative or quantitative)
- Peer-reviewed journal articles
- Articles including women aged 20 and above
- Full-text available in English

Exclusion Criteria:

- Studies based only in rural areas or with mixed urban–rural data without separation
- Studies focused only on clinical trials or biomarkers
- Papers without mention of barriers or determinants
- Articles with inaccessible full-text or not peer-reviewed

Review Search strategy and Study Selection Process

Phase	**Description**	**Records (n)**
Identification	Records identified from databases: • PubMed (n=97) • Scopus (n=85) • Google Scholar (n=110)	292
Removed	Records removed before screening: • Duplicates (n=65) • Non-English or inaccessible full-text (n=10)	75 removed

Phase	Description	Records (n)
Screening	Records screened based on title and abstract	217
	Records excluded after screening: • Not related to urban India (n=46) • HPV/molecular studies only (n=20) • Grey literature (n=22)	88 excluded
Eligibility	Full-text articles assessed for eligibility	129
	Full-text articles excluded: • No clear focus on barriers (n=49) • Mixed urban–rural data (n=25) • Lacked qualitative/quantitative data (n=13)	87 excluded
Included	Studies included in the final narrative review	42

4. Results

The 42 included studies revealed five major categories of barriers: 1) Individual-Level Barriers, 2) Socio-Cultural and Gender Norms, 3) Health System and Provider Barriers, 4) Economic and Logistical Challenges, 5) Programmatic and Policy-Level Limitations. Each theme was supported by multiple studies and described in detail.

Theme 1: Individual-Level Barriers

These are personal factors—often shaped by knowledge, emotions, and perceived vulnerability—that influence a woman's decision to undergo breast cancer screening.

1.1. Lack of Awareness and Knowledge

Many urban women remain unaware of breast cancer symptoms, early detection benefits, or the availability of screening facilities. Even educated populations in metropolitan areas like Delhi and Mumbai show knowledge gaps, highlighting that education alone does not guarantee awareness. *[2, 3, 21, 34]*

1.2. Fear of Diagnosis and Death

1.3. A cancer diagnosis is equated with a death sentence in many communities, resulting in avoidance of screening to escape possible confirmation. The fear of chemotherapy, mastectomy, and social exclusion further intensifies reluctance. *1, 5, 30, 38, 42]*

1.4. Low Perceived Risk and Asymptomatic Misconceptions

Many women believe they do not need screening because they feel healthy or lack a family history. This complacency leads to delayed detection. *[5, 11, 26, 31]*

1.5. Embarrassment and Privacy Concerns

Cultural discomfort in exposing breasts, even to female providers, and the fear of judgment deter women from participating in clinical breast exams or mammograms. *[12, 22, 37]*

Theme 2: Social-Cultural and Gender Norms

Social constructs and patriarchal influences shape women's healthcare decisions in urban India, often limiting their autonomy.

2.1. Stigma and Cultural Taboos

Breast cancer is often associated with shame or impurity. Talking about breasts or cancer is considered inappropriate in conservative households, and screening is equated with indecency or promiscuity. *[1, 27, 35, 42]*

2.2. Male-Dominated Decision-Making and Lack of Autonomy Many women require permission or support from male family members to access healthcare. In slum areas, husbands may deny the need or funds for screening. *[18, 22, 40]*

2.3. Persistence of Myths and Misconceptions Common myths include beliefs that mammography causes cancer or that breast cancer can be cured by home remedies. These misconceptions are rarely challenged due to poor health education. *[5, 7, 11, 19, 26, 31]*

Theme 3: Health System and Provider Barriers

Interactions with healthcare infrastructure and providers often discourage women from undergoing screening.

3.1. Lack of Provider-Initiated Screening

Many women reported never being advised about screening by doctors, even during unrelated medical visits. Without provider endorsement, screening is not seen as essential. *[15, 28, 38]*

3.2. Shortage of Female Health Personnel

The absence of female doctors or technicians in screening centers creates discomfort, especially for breast-related procedures. In conservative families, this becomes a non-negotiable barrier.*[24, 41]*

3.3. Poor Communication and Provider Insensitivity

Women have reported negative experiences with staff—rude behavior, lack of privacy, rushed consultations—which reduce trust and deter follow-up visits. *[6, 16, 33]*

Theme 4: Economic and Logistical Challenges

Despite urban settings having physical proximity to health services, socio-economic constraints significantly limit access.

4.1. High Out-of-Pocket Costs and Wage Loss

Even minimal consultation or diagnostic costs are unaffordable for many urban poor women. Additionally, attending screening often requires missing daily wages or household duties. *[4, 10, 17, 23, 30, 36]*

4.2. Transportation and Distance Barriers

Urban sprawl, long commute times, and the cost of local transport deter women—especially those in informal settlements—from reaching screening centers.

[13, 20, 25, 32]

4.3. Unawareness or Mistrust of Free Government Services

Government programs like NPCDCS offer free screening, but many women are unaware or distrustful due to inconsistent quality or past negative experiences. *[9, 19, 21]*

Theme 5: Programmatic and Policy-Level Limitations

Systemic flaws in public health programming reduce the effectiveness of breast cancer screening efforts in urban contexts.

5.1. Inadequate Urban Outreach by National Programs

Programs designed at national or state levels often fail to reach urban slum dwellers, who fall through administrative cracks due to lack of formal residency or documentation.*[9, 16, 29]*

5.2. Weak Public Awareness Campaigns

Mass media and local campaigns targeting breast cancer screening are either rare or ineffectively designed for urban poor populations.*[14, 26, 29, 40]*

5.3. Policy Blind Spots and Data Gaps

Policy attention and research often focus on rural health, neglecting the complex barriers faced by low-income urban populations.*[18, 32, 33]*

5, Discussion

This narrative review examined the barriers to breast cancer screening among women in urban India by synthesis and utilising evidence from 42 peer-reviewed studies and reports. The findings reveal that despite urban areas being better resourced compared to rural settings, multiple socio-cultural, structural and systemic challenges persist, impeding women's access to and utilisation of breast cancer screening services.

1. Persistence of Knowledge Gaps and Low Risk Perception One of the most prominent findings is the pervasive lack of awareness and knowledge about breast cancer and its screening modalities across urban populations, including educated women [2, 3, 21, 34]. Despite living in proximity to

healthcare infrastructure, women often underestimate their risk due to absence of symptoms or family history, leading to a false sense of security [5, 11, 26, 31]. Fear of diagnosis and misconceptions about treatment further reduce willingness to undergo screening [1, 30, 38, 42].

2. Sociocultural Resistance and Gender Norms Urban Indian society continues to be influenced by patriarchal norms that affect women's autonomy in healthcare decision-making. Many women must seek permission from male family members to access services [18, 22, 40]. Cultural taboos, stigma surrounding breast-related discussions, and embarrassment associated with clinical breast exams act as major deterrents [7, 12, 27, 35, 37]. Myths and misinformation—such as the belief that mammography causes cancer or that cancer is incurable—remain deeply rooted [5, 11, 19, 26, 31].

3. Health System Shortcomings and Provider Gaps. The role of healthcare providers is critical in encouraging screening. However, studies reveal that many providers do not actively recommend breast cancer screening, especially during unrelated medical consultations [15, 28, 38]. The shortage of trained female health personnel further discourages women due to privacy concerns [24, 41]. Additionally, provider insensitivity and lack of proper communication contribute to poor trust and uptake of services [6, 16, 33].

4. Financial, Time, and Access Constraints Economic and logistical barriers significantly influence screening behaviour. Even in urban areas, out-of-pocket costs, lack of free and reliable services, and fear of wage loss serve as barriers [4, 10, 17, 23, 30, 36]. Women from low-income communities also struggle with travel costs and service location accessibility [13, 20, 25, 32]. In many cases, urban public services are either under utilised or poorly publicised [9, 21].

5. Policy and Programmatic Gaps. While national programs like the NPCDCS aim to provide breast cancer screening, their urban outreach remains limited and inconsistent [9, 14, 29]. Health education campaigns rarely target urban slum populations effectively, leading to widespread ignorance of existing free or subsidized screening services [14, 26, 29, 40]. Furthermore, many policies are generalised and lack the specificity to address unique challenges in urban informal settlements [18, 32, 33].

6. Intersectionality and Marginalisation in Urban Health. The review reveals how intersecting factors like poverty, gender, education, caste, and geography compound the barriers faced by urban women. Women in slums and informal settlements are disproportionately affected due to poor health infrastructure, social vulnerability, and limited government focus [10, 17, 18, 33, 40]. These findings underscore the need for an equity-focused lens in public health strategies.

6. Conclusion

Breast cancer screening in urban India faces multifaceted challenges that go beyond access to services. This review reveals that women often encounter a combination of fear, stigma, low awareness, cultural taboos, and systemic inefficiencies that deter them from early detection and timely care. Socioeconomic constraints, gender norms, misinformation, and limited engagement from healthcare providers further compound the issue. Despite urban settings being perceived as better equipped, disparities in screening uptake persist, particularly among marginalized communities. Addressing these barriers requires culturally sensitive education, stronger community-based outreach, improved provider communication, and more accessible health infrastructure. For meaningful progress, future interventions must move beyond awareness to actively dismantle the social and structural obstacles preventing women from participating in life-saving screening programs.

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