

**ASSESSMENT OF AVAILABILITY OF CANCER SCREENING FACILITY
ACROSS VARIOUS PUBLIC HEALTH FACILITIES IN JAIPUR, RAJASTHAN**

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

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Under the Supervision and Guidance of

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CERTIFICATE

This is to certify that **Mr. Pulkit Shrma**, student of MBA, Indian Institute of Health Management Research (IIHMR University, Jaipur) has successfully completed his Dissertation & Internship at National Health Mission, Rajasthan from 10th March, 2025 to 31st May, 2025.

His performance was found satisfactory. We extend his good wishes for a bright and successful career ahead.


(Dr. Bharti Dixit)
Mission Director, NHM
Joint Secretary
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CERTIFICATE

This is to certify that dissertation titled Assessment of Availability of cancer screening Facility across various Public Health facilities in Jaipur, Rajasthan is a record of the research work undertaken by Pulkit Sharma in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

A handwritten signature in blue ink, appearing to be 'V. Tanu', with the date '10/6/2025' written below it.

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled "Assessment of Common oncological screening across various government healthcare centers in Jaipur, Rajasthan" remains the Bonafide record of my original research work. I declare that it possesses not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others possesses been duly acknowledged in the text.

Pulkit

Pulkit Sharma

Date

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Abbreviations

AB-PMJAY	Ayushman Bharat-Jan Arogya Yojna
AAM	Ayushman Arogya Mandir
ASHA	Accredited Social Health Activist
CHC	Community Health Centre
COPD	Chronic Obstructive Pulmonary Disease
DH	District Hospital
GLOBOCAN	Global Cancer Observatory
GoI	Government of India
HMCPPF	The Health Minister's Cancer Patient Fund
MPW	Multi Purpose Worker
NCD	Non-Communicable Disease
NCG	National Cancer Grid
NHM	National Health Mission
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
HWC	Health and Wellness Centre
PHC	Primary Health Centre
PHR	Personal Health Record
RAN	Rashtriya Arogya Nidhi
SC	Sub Centre
SDH	Sub-District Hospitals
UHC	Universal Health Coverage
UPHC	Urban Primary Health Centre
WHO	World Health Organization

Abstract

Introduction:

Cancer remains one of the leading causes of death in India, and despite national programs advocating for early detection, the availability and implementation of routine cancer screening at public health facilities remain inconsistent. The study titled “*Assessment of Common Oncological Screening Across Various Government Healthcare Centers in Jaipur, Rajasthan*” aimed to evaluate the current status of cancer screening services (oral, breast, and cervical) and the barriers affecting effective implementation.

Objectives:

- To assess the availability of screening services for common cancers (oral, breast, and cervical) in public health facilities in Jaipur.
- To identify the screening techniques used and evaluate facility readiness.
- To understand challenges faced by healthcare workers in delivering screening services.
- To assess healthcare workers’ training and awareness initiatives.
- To recommend improvements based on provider feedback.

Methodology:

A **cross-sectional descriptive study** was conducted across **10 government healthcare facilities** in Jaipur, including PHCs, CHCs, sub-centers, and a district hospital. **Primary data** was collected from frontline healthcare workers using a **semi-structured questionnaire via Google Forms**. The sampling method was **convenience-based**, and responses were analyzed through **descriptive statistics and thematic analysis** using Excel.

Results:

Only **30% of the surveyed facilities** were actively conducting cancer screening. Oral cancer screening was most common (100% of active facilities), followed by breast (67%) and cervical (10%). VIA, clinical breast examination, and visual oral exams were the primary techniques used. A **lack of trained personnel, inadequate capacity-building, insufficient infrastructure, and poor documentation** were identified as major barriers. Notably, only one facility reported staff training, and most lacked designated screening spaces or follow-up procedures. IEC materials were available in 70% of the centers, but patient engagement remained low.

Conclusion:

There exists a significant gap between national cancer screening policies and their on-ground execution in Jaipur’s public health facilities. The study highlights the urgent need for **systematic capacity-building, facility readiness, regular monitoring, and community outreach** to strengthen cancer screening programs. Recommendations include infrastructure investment, digital record systems, training programs for staff, and enhanced awareness efforts to improve early detection and reduce cancer-related morbidity and mortality.

Keywords:

Oncological Screening, Public Health Facilities, Capacity-Building, Breast Cancer, Cervical Cancer, Oral Cancer, Facility Readiness, Jaipur, NP-NCD

Chapter 1- Introduction

Background

The term "NCDs" refers to a group of diseases that continue to be not mainly caused by acute infections, tend to persist over time, and often require continuous medical attention and management. Examples include diabetes, cardiovascular diseases, cancer, and chronic respiratory conditions.

One of the biggest public health issues in India and around the world remains still cancer. It ranks second globally among NCDs in terms of causes of death. The World Health Organization (WHO) estimates that cancer killed around 10 million people in 2020, or roughly one out of every six people worldwide.

Cancer remains a broad family of diseases that may start in virtually any organ or tissue of the body. It develops when abnormal cells start growing uncontrollably, spreading to nearby tissues, and possibly to distant areas of the body via metastasis. Spread accounts for most cancer-related deaths. Cancer remains usually defined as a malignant growth or neoplasm, with widespread metastasis being the primary reason for death in most cancers.

Cancer remains a multi-step development process that usually goes from precancerous lesion to malignant tumor. This process develops when normal cells continue to be transformed into tumor cells as a result of an interaction between an individual's genetic predisposition and three primary categories of external factors:

1. Biological carcinogens, such as infections due to specific viruses, bacteria, or parasites;
2. Physical carcinogens, including ultraviolet (UV) radiation and ionizing radiation.

India's Cancer Statistics

In India, over 50% of cancer-related deaths continue to be due to breast and cervical cancers in women, and lung and oral cancers in men.

Why oncological screening remains important?

The goal of oncological screening remains to find cancer before any symptoms appear. Early detection of cancer or abnormal tissue may make treatment or cure simpler. The cancer can contain progressed and spread by the time symptoms show up. This may make it more difficult to cure or treat the malignancy.

There continue to be different kinds of screening tests.

1. Physical examination and medical history: A healthcare provider checks the body for lumps or other abnormal signs and assesses overall health. They also review the patient's medical history, including past illnesses and treatments.
2. Laboratory tests: These involve analyzing samples of blood, urine, tissue, or other bodily substances to detect abnormalities.
3. Imaging techniques: Methods used to generate visual representations of internal body structures.
4. Genetic testing: Laboratory analysis of tissue or cells to identify changes in genes or chromosomes. These changes can signal the presence of a disease or an increased risk of developing one.

Benefits of oncological screening

- oncological screening makes therapy simpler and more efficient by identifying the disease before it spreads throughout the body.
- A person's chances of surviving cancer improve with early discovery of the disease.
- Early detection also reduces treatment expenses and the need for light therapy and chemicals.
- Early cancer diagnosis also entails identifying the issue before a person experiences the symptoms of the disease's internal presentation.

Since 2010, the Government of India possesses been implementing the NP-NCD across all States and Union Territories. The initiative focuses on the prevention and management of major NCDs,

such as hypertension, diabetes, cardiovascular conditions, cancers, stroke, chronic kidney disease, chronic respiratory illnesses (COPD/asthma), and non-alcoholic fatty liver disease.

The programme emphasizes early detection, effective management, timely referral, health education, facility readiness development, and capacity building. Under the NHM, significant progress possesses been made, with the establishment of 753 district-level NCD clinics, 356 day care centers, and 6,238 CHC-level clinics. These centers play a vital role in promoting awareness and facilitating early diagnosis of NCDs at various levels of healthcare delivery.

As part of the Comprehensive Primary Health Care initiative under NHM, a population-based screening program possesses been launched to address the growing burden of NCDs. This includes screening individuals aged 30 and above for diabetes, hypertension, and three common cancers—oral, breast, and cervical. The Ayushman Bharat - Ayushman Arogya Mandirs (AAMs) serve as key platforms for delivering these preventive services. By July 29, 2024, a total of 173,827 AAMs had been operational nationwide.

To strengthen implementation, over 1.4 million frontline healthcare workers, including ASHAs, Medical Officers, CHOs, Staff Nurses, and MPWs, had been trained by May 10, 2024. Their capacity-building focused on screening, community awareness, health promotion, and facilitating referrals to improve early detection and management of NCDs

Chapter 2- Review of literature

Table 2.1 overview of reviewed paper

S. no.	Author name & Year	Title	Source	Findings
1.	Madeleine Jones, Sujha Subramanian, Regi Jose Year- 2023	Cancer screening behaviors and preferences among women in southern India	PubMed	Among priority screening respondents, 14.39% indicated that they had previously had cancer screening, while in the entire sample, 14.22% had. The two most frequent reasons that were reported by respondents as to why they did not carry out cancer screening were not being advised to do so by a health provider, at 42.18%, and not knowing the significance of screening, at 40.76%. Although a majority believed that early detection could lead to better cancer outcomes, 64.93% perceived their personal risk of developing cancer as very low. Furthermore, 65.15% of individuals in the priority group and 61.61% of those who had never been screened stated that they would be willing to undergo all recommended cancer screenings if their physician advised them to do so. When additional barriers reported by participants were addressed, the willingness to get screened .
2.	Gopika MG, Prabhu PR,	Status of cancer	Research Gate	Among females, 1.9% had ever undergone cervical screening, 0.9% had

	Thulaseedharan JV Year- 2022	screening in India: An alarm signal from the National Family Health Survey (NFHS-5)		breast screening, and 0.9% had oral cavity screening. About 1.2% of males participated in oral cavity screening. Tamil Nadu had the highest rates of cervical and breast cancer screening participation (9.8% and 5.6%, respectively), followed by Mizoram (6.9% and 2.7%) and Puducherry (7.4% and 4.2%). Women in the Andaman and Nicobar Islands (10.1%) and men in Andhra Pradesh (6.3%) had the highest oral cancer screening rates.
3.	Mangayarkarasi V, Durairaj E, Ramanathan V Year- 2025	Enhancing Cancer Screening and Early Diagnosis in India: Overcoming Challenges and Leveraging Emerging Technologies	PubMed	Integrated Strategies: The review comes to the conclusion that India has to integrate new technology with low-cost screening that has been shown to be effective. Implementing cutting-edge screening instruments, increasing access (such as mobile units for rural areas), and fortifying health systems with transparent plans and oversight are important tactics. Policy and Resources: To guarantee fair cancer care, it is strongly advised to mobilize long-term funding and human resources. International partners, NGOs, and the government should work together to find answers. The importance of policy interventions—such as expanded immunization programs, fiscal incentives for research,

				subsidized screening tests, and regulatory support—is emphasized. Workforce Training: The authors place a strong emphasis on workforce training, which includes providing healthcare professionals with in-depth instruction in clinical skills, communication, and cultural competency as well as empowering community health workers and primary-care teams. In order to close the gap between urban and rural areas, they also support community engagement and the deployment of mobile screening vans. Community Collaboration: Multi-level cooperation is necessary for effective implementation. According to the assessment, local communities, NGOs, and patient organizations should be involved in program development. It suggests testing focused screening programs in a few areas before expanding them across the country. Impact on Public Health: In general, the authors contend that integrating cutting-edge technologies with scalable, low-resource approaches can significantly reduce cancer incidence and mortality in India. These evidence-based approaches give policymakers a road map for providing more equitable
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				cancer care while also being in line with global NCD reduction targets (such as the WHO's 2030 goals).
4.	Kedar A, John A, Goala S, Babu R, Tapkire R, Kannan R, Hariprasad R Year- 2021	Barriers and facilitators in implementing population based common cancer screening through community health workers	PubMed	1. Community-Level Barriers: Fear, attitudes, and personal beliefs that deter people from getting screened. 2. Community-Level Facilitators: ➤ Screening exam accessibility. ➤ Family assistance. ➤ Have faith in CHWs to deliver services. 3. CHW-Level Barriers: ➤ Having trouble inspiring community members. ➤ Supervisors' lack of support. ➤ Lack of drive to work 4. CHW-Level Facilitators: ➤ Screenings during home visits are convenient. ➤ Empowerment and the development of skills via instruction. ➤ Collaboration between CHWs.

Chapter 3- Methodology

Research gap

Despite the existence of national programs like the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD) and Ayushman Bharat, which mandates regular cancer screening for oral, breast, and cervical, there is limited evidence on how effectively these guidelines are being implemented at the ground level in public health facilities.

Most of the existing studies focus on population knowledge, attitudes, and practices regarding cancer screening or on the efficacy of individual screening techniques. However, there is a lack of comprehensive research evaluating the operational status, infrastructural readiness, provider training, and systemic challenges within public sector health facilities—particularly at the primary and secondary levels.

This study addresses this gap by providing a facility-level assessment of cancer screening services, incorporating healthcare provider perspectives and practical implementation challenges in a real-world setting.

Research Question

To what extent continue to be common oncological screening services (for breast, cervical, and oral cancers) are being screened in government healthcare centers, and what continue to be the key challenges and gaps in providing screening services at the public health facilities.

Objectives

1. To assess the availability of screening services for common cancers (breast, cervical, and oral) across selected government healthcare centers.
2. To evaluate the techniques and tools used for oncological screening at public health facilities.
3. To identify the challenges and barriers faced by healthcare professionals in carrying out routine oncological screening services.
4. To assess the level of skills of healthcare workers involved in oncological screening activities.
5. To recommend the inclusion of inputs received from the healthcare workers involved in oncological screening services at government healthcare centers.

Study design

This research had been conducted as a cross-sectional study aimed at assessing the availability, practices, challenges, and gaps in oncological screening services across government healthcare centers. The design facilitated the collection of data at a single point in time, enabling a snapshot evaluation of existing service delivery and healthcare provider perspectives.

Study population

Frontline healthcare workers in the government health facilities in Jaipur.

Setting (Research area)

The study had been carried out across government healthcare centers in Jaipur, Rajasthan, including:

- ⇒ Primary Health Centres (PHCs)- Begas, Vaishali Nagar, Sirsi, Kumbha Marg
- ⇒ Urban PHC- Gandhi Vihar
- ⇒ MCWC- Gandhinagar
- ⇒ Community Health Centres (CHCs)- Dhankya, Sirsi
- ⇒ Sub-Centre- Fatehpura, Jaipur
- ⇒ District Hospital- Kanwatiya Hospital

These facilities had been selected to represent various levels of the public healthcare delivery system under the National Health Mission (NHM), ensuring a comprehensive understanding of screening practices at both primary and secondary levels of care.

Data collection method

Data had been collected through a primary survey using a semi-structured questionnaire developed on Google Forms. The form had been disseminated to healthcare professionals working in the selected facilities. It consisted of both closed- and open-ended questions designed to capture quantitative data as well as qualitative insights related to the screening of breast, cervical, and oral cancers.

Sampling design

Sample size

The study included a total of 10 government healthcare centers across different categories and levels.

Sampling technique

Convenience sampling method had been used.

Inclusion criteria

Health facilities that conducted screening for common cancers (breast, cervical, and oral) as per the NCD had been included.

Exclusion criteria

Facilities that dealt exclusively with rare cancers or cancers not prioritized under the NP-NCD guidelines had been excluded from the study.

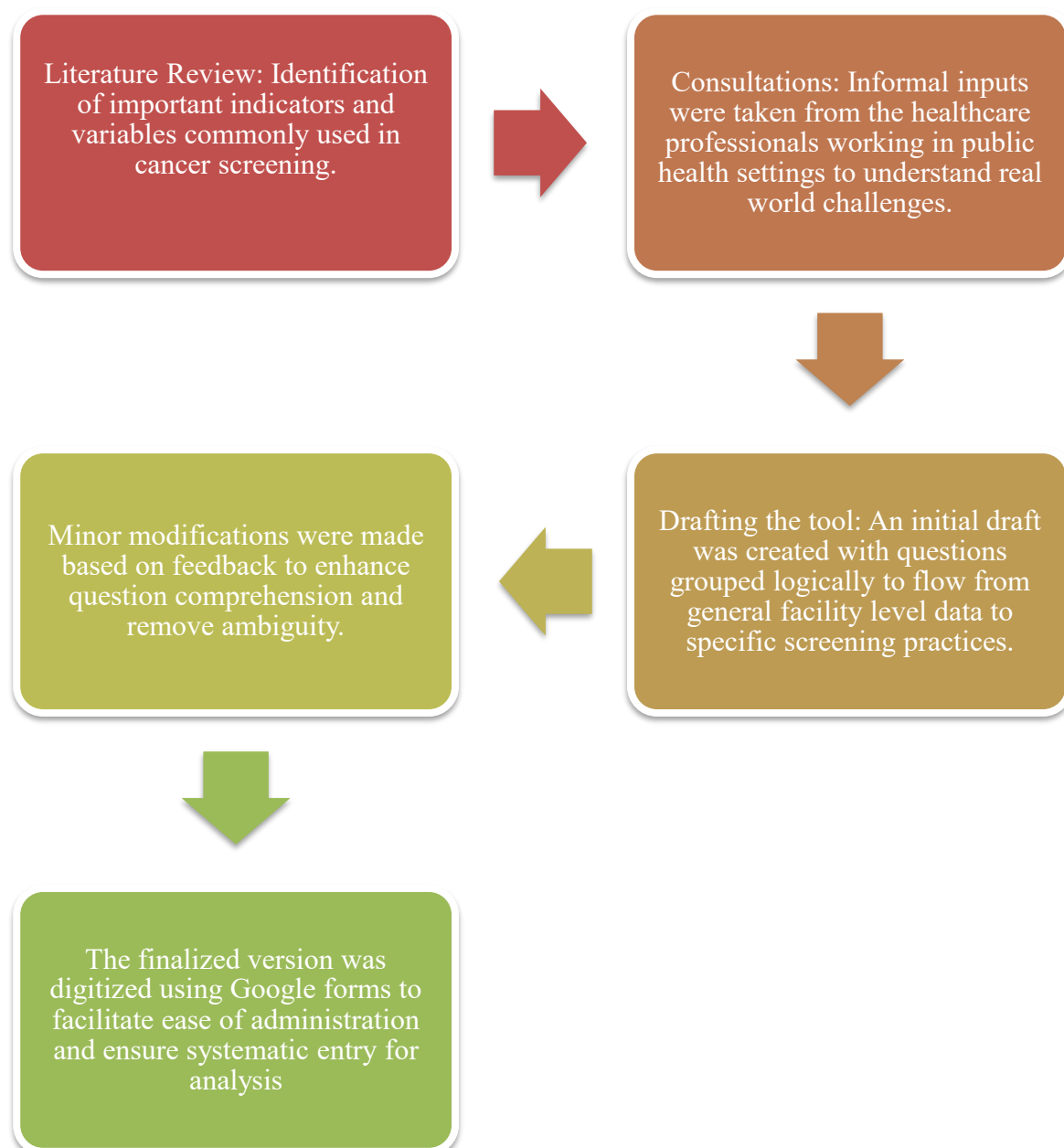
Data Collection Tool-

Questionnaire

Development of the tool

The questionnaire had been developed after an extensive review of existing literature, national guidelines on oncological screening (such as the NPCDCS guidelines), and discussions with public health experts and practitioners. The goal had been to create a practical and contextually relevant tool that could accurately capture both qualitative and quantitative aspects of oncological screening practices at the primary care level.

Figure 3.1 Key steps in tool development included:



Description of the tool

The primary data collection instrument used in this study had been a structured, self-administered questionnaire developed to evaluate the status, practices, challenges, and gaps in oncological screening services at government healthcare centers. The tool had been designed using Google Forms to ensure ease of distribution, user accessibility, and efficient data collection and management.

The questionnaire included a combination of multiple-choice, dichotomous (Yes/No), and short-answer questions, and had been divided into thematic sections to systematically capture relevant data. These sections had been aimed at gathering both quantitative and qualitative insights from healthcare professionals directly involved in or responsible for oncological screening services.

Structure and Components of the Questionnaire:

Respondent Profile:

- Name (optional)
- Designation
- Years of experience

This section helped contextualize responses based on the professional background and experience of the respondent.

Facility Screening Practices:

- Whether the facility conducts regular oncological screening
- Types of cancers screened (Breast, Cervical, Oral, Others)
- Frequency of screening (Daily, Weekly, Monthly, Occasionally, Not at all)

These questions provided an overview of the current oncological screening activities at each facility.

Screening Techniques:

- For breast cancer: Mammogram, Clinical Breast Exam, Ultrasound, MRI, Others
- For cervical cancer: Pap smear, HPV test, VIA (Visual Inspection with Acetic Acid)
- For oral cancer: Visual oral exam, Biopsy, Toluidine Blue Staining, Others

This section captured the diagnostic approaches used across facilities, reflecting the availability and utilization of clinical tools and technologies.

capacity-building and IEC Materials:

- Whether healthcare providers used to have received capacity-building on screening procedures
 - Availability of IEC (Information, Education, Communication) materials for patient awareness
- These items assessed preparedness and awareness-building efforts.

Challenges and Barriers:

- Multiple-choice question listing common challenges such as lack of staff, capacity-building, equipment, low awareness, and administrative barriers
- This section identified the primary operational barriers to effective screening implementation.

facility readiness and Documentation:

- Availability of a designated room or space for oncological screening
 - Maintenance of screening registers or electronic records
- These questions explored the physical and administrative readiness of facilities to conduct organized screening programs.

Follow-Up and Referral Systems:

- Whether follow-up remains done for positive screening cases
 - Ability to refer suspected cases to higher centers
- This helped assess continuity of care and integration of services.

Suggestions and Resource Needs:

- Open-ended suggestion box for improvement
- Selection of resources that would enhance screening (e.g., trained staff, separate screening room, equipment, awareness programs)

This section captured provider perspectives on interventions and priorities for strengthening oncological screening services.

Patient Engagement and Awareness:

- How patients continue to be informed about screening (e.g., OPD visits, health talks, camps, IEC materials)

These insights offered a glimpse into the community outreach and communication strategies being used.

Scoring and interpretation

No official scoring system had been utilized because the instrument had been a semi-structured questionnaire intended mainly for exploratory and descriptive purposes. Rather, replies had been examined in terms of their distribution and frequency. In order to identify common trends and problems, open-ended replies had been thematically grouped and multiple-choice responses had been quantified.

The following had been the main topics of interpretation:

1. The availability of screening services for oral, cervical, and breast cancers.
2. The kinds of screening methods used at different levels of healthcare facilities.
3. The regularity of screening procedures.
4. The availability of defined areas, equipment, and qualified personnel.
5. Healthcare professionals identified issues and proposed solutions.

Data analysis

1. Data from Google Forms had been exported into Microsoft Excel for cleaning, coding, and analysis.

2. Descriptive statistics such as frequencies and percentages had been used to summarize responses.
3. Thematic analysis had been applied to open-ended questions to identify key themes related to challenges and suggestions.
4. Tables and charts had been created to visually represent findings, including types of cancer screened, techniques used, availability of resources, and common barriers.

Ethical Considerations

The study had been conducted with ethical integrity intact. All participants gave their informed consent after being fully informed of the study's objectives, their voluntary involvement, and their freedom to discontinue participation at any time. By giving each respondent a unique code and refraining from gathering any individually identifiable information, confidentiality and anonymity had been maintained. Written and/or verbal agreement had been also acquired for audio recordings of the interviews and the FGD.

Only scholarly uses had been made of the safely preserved data. The instruments, procedures, and study protocol had been examined for participant comfort and safety and complied with ethical research guidelines. Particularly in delicate conversations about systemic issues, care had been taken to guarantee polite participation.

Chapter 4- Result

A total of 10 government healthcare centers—including Primary Health Centres (PHCs), Community Health Centres (CHCs), Sub-Centres, and District Hospitals—had been assessed to evaluate the common oncological screening services.

Public health facilities	Location
Primary Health Centres (PHCs)	Begas
	Vaishali Nagar
	Sirsi
	Kumbha Marg
Urban PHC	Gandhi Vihar
MCWC	Gandhinagar
Community Health Centres (CHCs)	Dhankya
	Sirsi
Sub-Centre	Fatehpura
District Hospital	Kanwatiya

Table-4.1 Location and Name of Facilities Visited for Data Collection

The assessment aimed to determine whether oncological screening had been being conducted and, if so, to identify the types of cancers screened and the techniques used.

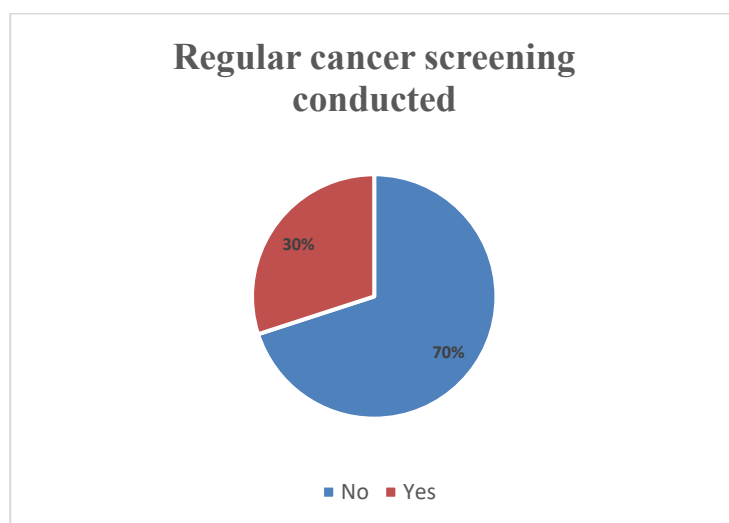


Figure 4.1- Only 30% of the assessed facilities were actively conducting cancer screening services, indicating significant gaps in implementation across the public healthcare system.

Among the 30% of the facilities where the common oncological screening had been conducted, three common cancers—oral, breast, and cervical—had been the focus of screening efforts at

these facilities. However, only one facility conducted screening for all three cancers, while the remaining facilities screened for only one or two types.

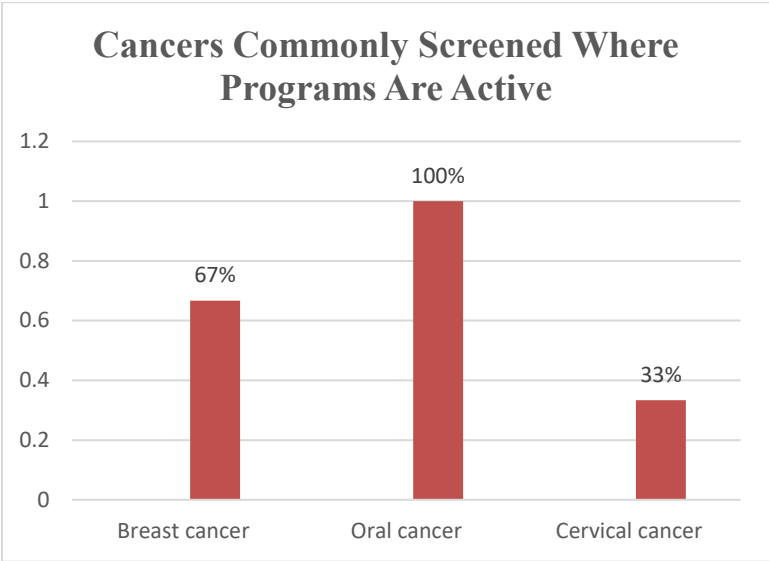


Figure.4.2- Oral cancer screening was universally implemented, with all surveyed facilities (100%) reporting its practice. In comparison, breast cancer screening was conducted in 67% of facilities, while cervical cancer screening had the lowest uptake, reported by only 10% of facilities.

The government healthcare centers adopted the following screening techniques for different cancers, as outlined in the table

Cancer Type	Screening techniques
Breast cancer	Clinical Breast Exam
Cervical cancer	VIA (Visual Inspection with Acetic Acid)
Oral cancer	Visual Oral Exam & Biopsy

Table-4.2 Types of oncological screening techniques used across different healthcare facilities.

Training received for cancer screening procedures

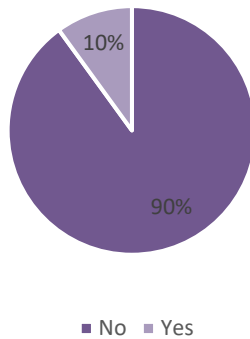


Figure. 4.3- Only a District Hospital reported having received training in cancer screening procedures, while the remaining 90% of the facilities indicated that no such training had been provided. This points to a significant gap in capacity building, especially at the primary and secondary care levels.

Availability of IEC (Information, Education, Communication) materials for patients

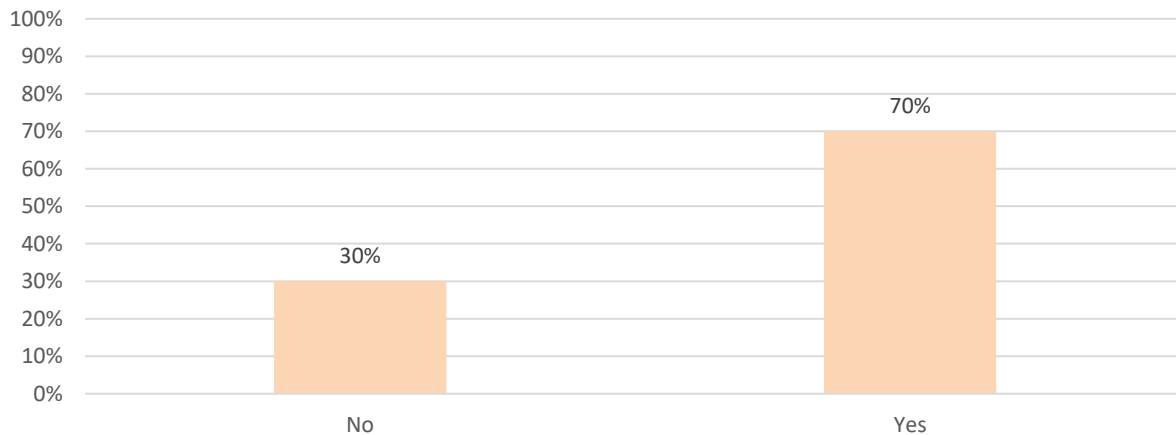


Figure 4.4- IEC materials were available in 70% of facilities, suggesting moderate patient education efforts, but the 30% gap indicates a need for improved coverage to ensure consistent health communication.

Furthermore, the analysis revealed that none of the surveyed facilities used to have a designated room or area specifically allocated for oncological screening. Additionally, follow-up procedures for individuals with positive screening results had been largely absent, indicating significant gaps in the continuity of care and patient management.

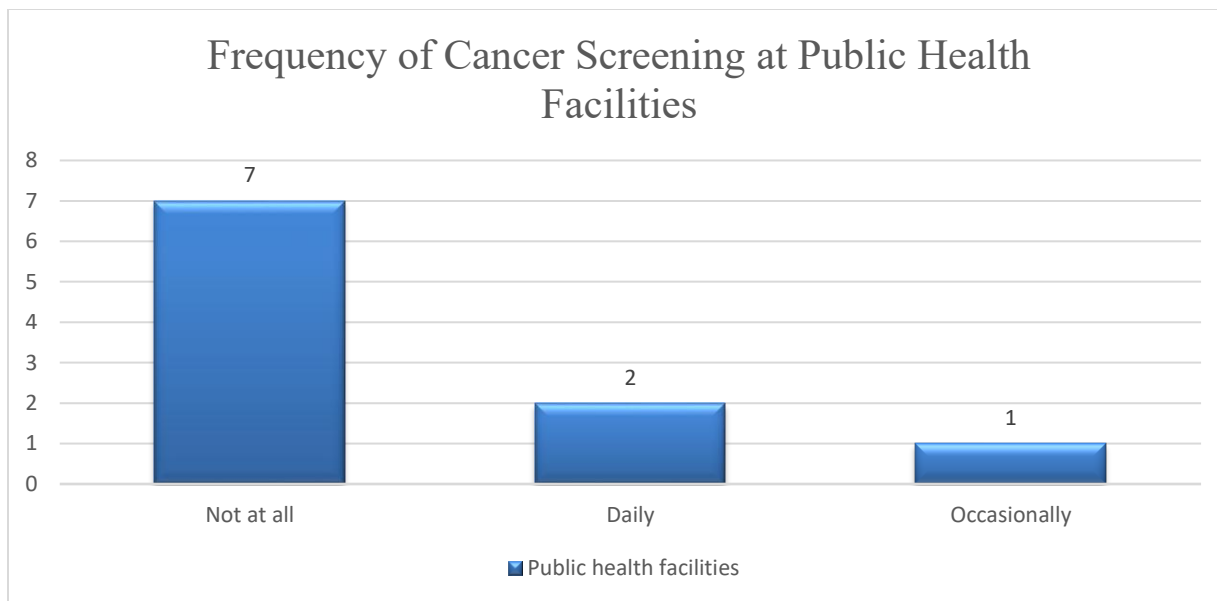


Figure 4.5- The bar graph illustrates the frequency of cancer screening across public health facilities, revealing that 7 facilities do not conduct screening at all, while only 2 conduct it daily and One facility conduct occasionally.

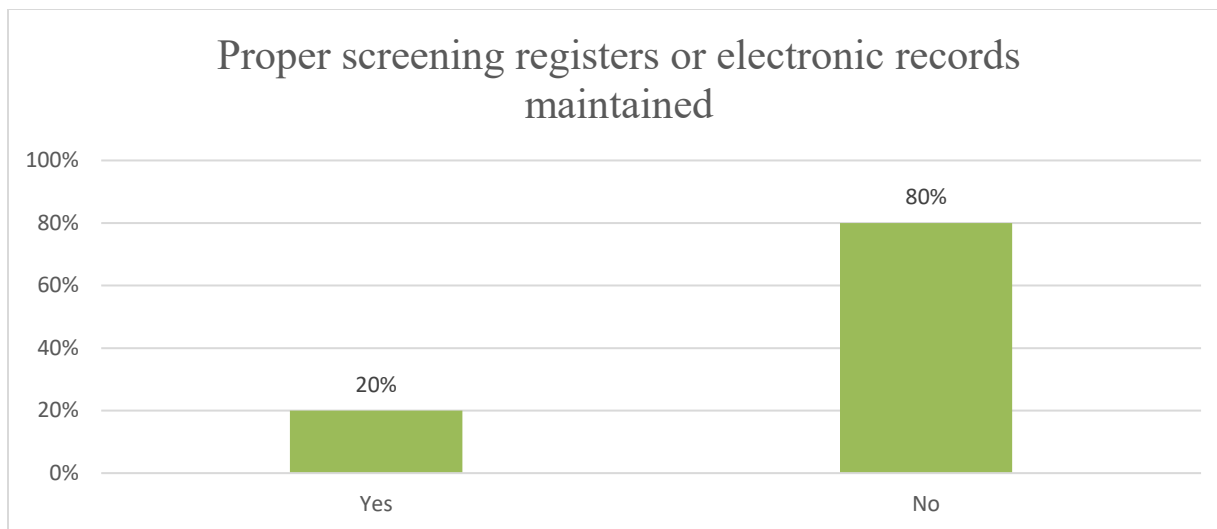


Figure 4.6- The bar graph illustrates that only 20% of the facilities maintained screening registers or electronic records.

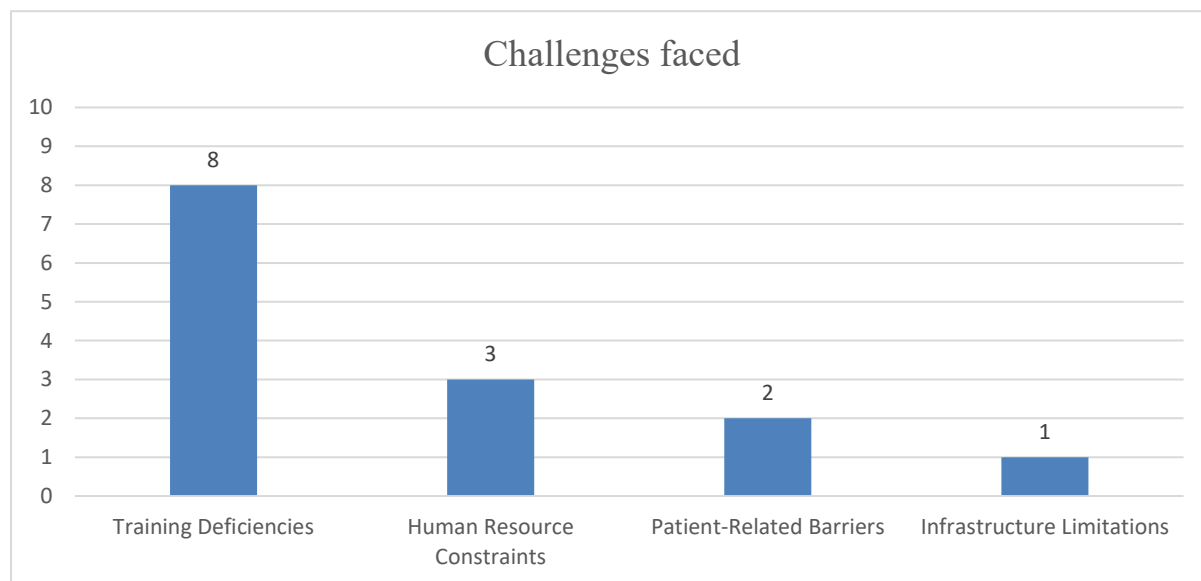


Figure 4.7 Challenges faced in conducting regular screening

Challenges in Conducting Regular Screening

1. capacity-building Deficiencies – The most frequently mentioned issue, with 8 out of 10 responses citing inadequate capacity-building as a major barrier.

2. Human Resource Constraints – Reported by 3 respondents who noted a lack of manpower, affecting the capacity to conduct screenings regularly.
3. Patient-Related Barriers – Low patient awareness had been cited by 2 respondents, highlighting a need for greater community outreach and education.
4. facility readiness Limitations – One response cited lack of equipment, indicating operational limitations.

Chapter 5- Discussion

Breast, cervical, and oral cancers continue to be among the most common and preventable with early screening, contributing to India's fast rising cancer burden. With an emphasis on the facts on the ground, this study sought to evaluate how prevalent oncological screening procedures had been being implemented in public health institutions. In order to comprehend the extent, gaps, and potential solutions in the existing screening environment, the mixed-method approach comprised a primary survey of healthcare staff and an examination of supporting literature. Significant differences between policy guidelines and their actual execution had been found in the main data gathered during field visits to several government healthcare centers. While the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) and the Ayushman Bharat initiative support population-based screening (PBS), its implementation remains still disjointed.

Only a small percentage of the facilities assessed used to have specialized personnel trained in clinical breast examination (CBE), oral oncological screening by visual examination, and Visual Inspection with Acetic Acid (VIA) for cervical cancer. Although there had been awareness among frontline healthcare professionals, especially Auxiliary Nurse Midwives (ANMs) and Accredited Social Health Activists (ASHAs), many pointed to a lack of practical capacity-building and follow-up assistance. Even the most basic screening kits and visual aids required for routine operations had been missing from certain facilities.

Appropriate documentation and data reporting procedures had been conspicuously lacking. Several respondents acknowledged performing opportunistic screenings instead of systematic ones and failing to keep organized records. This distorts knowledge of screening coverage and efficacy in addition to having an effect on follow-up care.

The referral systems lacked sufficient development. Although possible cancer cases had been occasionally found through screening, there had been insufficient connections to tertiary care centers and diagnostic services. Due to logistical or financial obstacles, patients frequently failed to reach higher centers, resulting in considerable drop-offs.

The majority of medical professionals noted that there had been a lack of community awareness regarding the significance of oncological screening. Although the health worker's duties included

community outreach, they noted opposition from groups because of stigma, anxiety about receiving a diagnosis, or the notion that those who continue to be asymptomatic don't need to be screened.

The survey's findings about gaps closely match patterns found in the literature. A study by Pati et al. (2021) found that there remains low population coverage and inconsistent application of common oncological screening in public healthcare settings. The study highlights facility readiness, resource allocation, and irregular monitoring as major obstacles.

Paul et al.'s (2020) study on PBS under the Ayushman Bharat scheme also identifies issues such low frontline worker motivation, insufficient capacity building, and a lack of workforce. This had been made clear in the current survey, where a number of ANMs and staff nurses voiced their worries about the growing burden without corresponding rewards.

The technique remains practical and economical, but its success depends largely on the consistency of capacity-building, quality assurance, and community engagement—areas that continue to present difficulties, as this study demonstrates—according to another article by Kumar et al. (2019) assessing the efficacy of VIA for cervical cancer detection in low-resource settings.

Singh et al. (2022) also investigated the causes of inadequate follow-up following positive screening results. The results show that patients continue to be unable to receive confirmation diagnosis or treatment due to sociocultural obstacles, logistical problems, and inadequate coordination within the health system. These findings continue to be consistent with information gathered from interviews with medical professionals who recognized the high patient attrition rate between screening and diagnosis.

Challenges Identified

1. Human Resource Limitations: A lack of qualified individuals with the ability to regularly perform screenings.
2. Lack of Supplies and facility readiness: Crucial equipment including as gloves, VIA kits, adequate lighting, and private examination rooms continue to be not available.
3. Inadequate capacity-building and Monitoring: One-time or irregular capacity-building sessions that lack monitoring or refresher courses.

4. Inadequate Documentation: There remains no centralized digital system to monitor patient referrals or screening results.
5. Gaps in Community Engagement: Misinformation and cultural taboos prevent people from participating in screening programs.

Chapter 6- Conclusion

The research's conclusions offer important new information about the state and difficulties of establishing routine oncological screening programs in Jaipur, Rajasthan's government healthcare centers. There remains a significant disconnect between the implementation of national policies and structured initiatives such as the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD) at the local level. The report identifies important deficiencies in patient referral procedures, paperwork, screening frequency, worker capacity-building, and facility readiness. These shortcomings highlight the pressing need for methodical measures to improve primary and secondary public health care.

Only thirty percent of the 10 public healthcare facilities surveyed in the initial study had been actively screening for cancer. Only a small percentage of them ever screened for the three frequent malignancies of the mouth, breast, and cervical region. The majority of screening procedures had been visual, such as visual inspection for oral cancer, clinical breast examination for breast cancer, and VIA for cervical cancer. The lack of sophisticated diagnostic tools at the local level indicates a dependence on simple, low-resource techniques. Furthermore, the efficacy and viability of the screening programs continue to be threatened by ongoing issues with staffing shortages and a lack of practical capacity-building.

In addition, the study found that inadequate record-keeping, a lack of a designated screening area, and inadequate follow-up procedures had been major obstacles. These impair early detection, prompt treatment, and overall patient outcomes in addition to lowering the standard of care. Crucially, a lot of healthcare professionals stated that they needed improved tools, regular capacity-building courses, and community outreach tactics to combat the stigma and ignorance that still discourage people from getting screened.

Implications of the Study:

1. To guarantee the effective provision of oncological screening services, it remains imperative to invest in human resources and capacity-building programs for frontline healthcare professionals, including ANMs, ASHAs, and staff nurses.
2. To enhance service delivery, facility readiness development remains crucial, including specialized screening rooms, sufficient screening kits, and standardized documentation tools.
3. Improving follow-up procedures and referral connections remains essential to enhancing results for those who continue to be screened.
4. To increase screening program participation and debunk cancer-related stigma and beliefs, health promotion and community awareness initiatives continue to be required.
5. Through efficient monitoring, sufficient money, and regional implementation plans, policymakers must concentrate on turning current guidelines into reality.

Recommendations

1. Capacity Building: To develop a skilled frontline screening workforce, regularly provide ANMs, ASHAs, and nurses with practical capacity-building and refresher courses.
2. facility readiness Investment: Make sure that basic equipment and screening supplies continue to be consistently available in all government healthcare centers.
3. Integrated Digital tools: Put in place intuitive digital tools for tracking and documenting screened people in real time.
4. Strengthen Referral Systems: To guarantee continuity of care from screening to treatment, clearly define referral channels and transportation connections.
5. Community Education: To mainstream screening and early detection, start community awareness campaigns with the use of peer educators, IEC materials, and local influencers.

References

1. Taneja N, Chawla B, Awasthi AA, Shrivastav KD, Jaggi VK, Janardhanan R. Knowledge, Attitude, and Practice on Cervical Cancer and Screening Among Women in India: A Review. *Health Sci Rev.* 2021.
2. Gopika MG, Prabhu PR, Thulaseedharan JV. Status of oncological screening in India: An alarm signal from the NFHS-5. *J Family Med Prim Care.* 2022.
3. Mittra I, Mishra GA, Dikshit RP, et al. Effect of screening by clinical breast examination on breast cancer incidence and mortality after 20 years. *BMJ.* 2021;372:n256.
4. Kedar A, John A, Goala S, et al. Barriers and facilitators in implementing population based common oncological screening through community health workers. *Asian Pac J Cancer Prev.* 2021.
5. Mangayarkarasi V, Durairaj E, Ramanathan V. Enhancing oncological screening and Early Diagnosis in India: Overcoming Challenges and Leveraging Emerging Technologies. *Indian J Public Health Res Dev.* 2025.
6. Sathishkumar K, Chaturvedi M, Das P, Stephen S, Mathur P. Cancer incidence estimates for 2022 & projection for 2025: Result from National Cancer Registry Programme, India. *Indian J Med Res.* 2022 Oct-Nov;156(4&5):598-607. doi:10.4103/ijmr.ijmr_1821_22. PMID:36510887; PMCID:PMC10231735.
7. Pan American Health Organization (PAHO). Noncommunicable diseases. Available from: <https://www.paho.org/en/topics/noncommunicable-diseases>
8. World Health Organization. Cancer fact sheet. Available from: <https://www.who.int/news-room/fact-sheets/detail/cancer>
9. Sathishkumar K, Chaturvedi M, Das P, Stephen S, Mathur P. Cancer incidence estimates for 2022 & projection for 2025: Result from National Cancer Registry Programme, India. *Indian J Med Res.* 2022 Oct-Nov;156(4&5):598-607. doi:10.4103/ijmr.ijmr_1821_22. PMID:36510887; PMCID:PMC10231735. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10231735/>