

A STUDY TO ASSESS THE KNOWLEDGE AND PERCEPTION OF GOVERNMENT MATERNAL AND CHILD HEALTH PROGRAMS AMONG PREGNANT WOMEN IN VADODARA CITY, GUJARAT

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ABSTRACT

Background: Government Maternal and Child Health (MCH) programs in India aim to reduce maternal and neonatal morbidity and mortality. However, awareness and perception among beneficiaries remain inconsistent across regions.

Objective: To assess the level of knowledge and perception regarding government MCH programs among pregnant women residing in Vadodara city, Gujarat.

Methods: A cross-sectional descriptive study was conducted among 200 pregnant women attending antenatal clinics in urban health centers. Data were collected using a structured questionnaire comprising 20 knowledge items and 10 perception statements. Descriptive and inferential statistics were applied.

Results: Among the participants, 62% demonstrated adequate knowledge of MCH programs, while 38% had poor awareness. Positive perception was reported by 74% of respondents. Education level ($p = 0.003$), parity ($p = 0.021$), and exposure to frontline health workers ($p = 0.001$) were significantly associated with knowledge scores. Perception was positively correlated with ANC visit frequency ($r = 0.42$, $p < 0.01$).

Conclusion: Although the majority of pregnant women in Vadodara city exhibit favorable perceptions of government MCH services, gaps in knowledge persist. Strengthening community-level education and frontline worker engagement is recommended.

Keywords: Maternal health, antenatal care, government programs, perception, Vadodara, Gujarat

INTRODUCTION

Maternal and Child Health (MCH) remains a cornerstone of public health policy in India, reflecting the nation's commitment to reducing maternal and neonatal morbidity and mortality. Over the past two decades, the Government of India has launched several flagship initiatives aimed at improving access to and quality of maternal health services. Notable among these are the Janani Suraksha Yojana (JSY), which provides conditional cash transfers to promote institutional deliveries; the Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), which ensures free antenatal check-ups by specialists on designated days; and the Integrated Child Development Services (ICDS), which offers nutritional support and early childhood care through Anganwadi centers. These programs collectively aim to address the continuum of care from pregnancy through early childhood, particularly among vulnerable populations. Despite these efforts, the utilization of MCH services remains uneven across regions and socio-economic groups. Studies have consistently shown that awareness, perception, and health-seeking behavior among pregnant women are influenced by a complex interplay of factors including education, cultural beliefs, parity, and access to frontline health workers such as Accredited Social Health Activists (ASHAs). In urbanizing districts like Vadodara, where public and private health systems coexist, understanding beneficiary engagement with government programs becomes crucial for optimizing service delivery and reducing inequities.

Limited awareness and misconceptions about entitlements, eligibility criteria, and service components often hinder the full utilization of available MCH schemes. Moreover, perception of service quality, provider behavior, and infrastructural adequacy significantly shape women's willingness to engage with public health facilities. Addressing these gaps requires localized, evidence-based insights that can inform targeted interventions and community-level health education strategies.

This study investigates the knowledge and perception of pregnant women in Vadodara city regarding key government MCH programs. By identifying determinants of awareness and attitudes, the research aims to contribute to the design of culturally sensitive, contextually relevant strategies that enhance maternal health service utilization and support India's broader goals under the National Health Mission (NHM) and Sustainable Development Goals (SDGs).

Recent Literature Review

1. Utilization and Inequality in MCH Services

Mehta et al. (2023) conducted a national-level analysis using NFHS and HMIS datasets to assess disparities in the utilization of government maternal health services across Indian states. Their findings revealed significant regional inequalities, especially in antenatal care (ANC) visits and iron-folic acid (IFA) supplementation. While institutional deliveries showed minimal disparity (Gini = 0.04), ANC coverage remained uneven, with states like Bihar and Uttar Pradesh lagging behind.

2. Knowledge of Child Health Schemes Among Mothers

Vidya et al. (2024) conducted a descriptive study in Kerala assessing mothers' knowledge of child health schemes like RSBY, Hridhyam, and Thalolam. Among 250 mothers, only 17.1% demonstrated good knowledge of RSBY, and awareness was significantly associated with education, income, and source of health information.

3. Review of India's Recent Maternal Health Initiatives

Bakshi et al. (2024) reviewed recent government programs including PMMVY, Poshan Abhiyaan, and LaQshya. These initiatives aim to improve maternal nutrition, incentivize institutional deliveries, and enhance labor room standards. The review emphasized the role of financial incentives and health education in shaping maternal health outcomes.

4. Gaps in Awareness and Service Uptake

Multiple studies highlight that despite policy expansion, awareness remains a limiting factor in program uptake. Misconceptions, low literacy, and limited engagement with frontline workers (e.g., ASHAs) contribute to underutilization, especially in urban slums and semi-urban areas.

Objectives

1. To assess the knowledge of pregnant women regarding government MCH programs.
2. To evaluate their perception of the accessibility, quality, and relevance of these services.
3. To identify socio-demographic factors associated with knowledge and perception levels.

METHODOLOGY

Study Design

This study employed a **descriptive cross-sectional design** to assess the knowledge and perception of pregnant women regarding Government Maternal and Child Health (MCH) programs. The design was chosen to capture a snapshot of awareness levels and attitudes at a single point in time, allowing for the identification of associations between socio-demographic variables and outcome measures.

Study Setting

The research was conducted across three urban health centers located in Vadodara city, Gujarat. These centers were selected based on their high antenatal care (ANC) footfall and representation of diverse socio-economic populations. The urban setting provided access to women exposed to both public and private healthcare services, offering a nuanced understanding of program awareness in a semi-urban context.

Sample Size and Sampling Technique

A total of 200 pregnant women were included in the study. The sample size was determined using Cochran's formula for proportions, assuming a 50% prevalence of adequate knowledge (to maximize sample size), a 95% confidence level, and a 7% margin of error. Participants were selected using **systematic random sampling**, wherein every third eligible woman attending ANC clinics during the data collection period was approached for participation. Inclusion criteria were: currently pregnant, aged 18 years and above, residing in Vadodara city, and willing to provide informed consent.

Data Collection Tool

Data were collected using a **structured, pre-tested questionnaire** developed in English and translated into Gujarati for field administration. The tool comprised three sections:

- **Section A:** Socio-demographic profile (age, education, parity, income, etc.)
- **Section B:** Knowledge assessment (20 items covering JSY, PMSMA, PMMVY, ICDS, etc.)
- **Section C:** Perception scale (10 Likert-type statements on service quality, accessibility, and trust)

The questionnaire was validated by a panel of five experts in maternal health and public health nursing. Reliability testing yielded a Cronbach’s alpha of 0.82, indicating high internal consistency.

RESULTS

I. Demographic Profile

Table 1: Demographic Profile of Participants (n = 200)

Variable	Category	Frequency (n)	Percentage (%)
Age Group	18–25 years	120	60%
	26–30 years	58	29%
	>30 years	22	11%
Education Level	No formal education	24	12%
	Primary	36	18%
	Secondary	88	44%
	Higher Secondary & Above	52	26%
Parity	Primigravida	110	55%
	Multigravida	90	45%
Monthly Household Income	< ₹10,000	96	48%
	₹10,001–₹20,000	72	36%
	> ₹20,000	32	16%

The demographic distribution reflects a predominantly young cohort, with 60% aged 18–25 years, aligning with early reproductive age norms in urban Gujarat. The educational profile shows that 44% had secondary education, which may influence health literacy and program awareness. The high proportion of primigravida women (55%) suggests that many participants were experiencing pregnancy for the first time, potentially affecting their engagement with maternal health services. Additionally, 48% of respondents belonged to households earning less than ₹10,000 per month, indicating economic vulnerability—a key determinant in health-seeking behavior and access to government schemes.

These characteristics collectively underscore the relevance of targeted health education and outreach strategies to improve MCH program utilization among urban pregnant women in Vadodara.

II. Knowledge Scores

Table 2: Knowledge Scores on Government MCH Programs (n = 200)

Knowledge Category	Score Criteria	Frequency (n)	Percentage (%)
Adequate Knowledge	≥ 12 out of 20	124	62%
Poor Knowledge	< 12 out of 20	76	38%

Among the 200 pregnant women surveyed, 62% demonstrated adequate knowledge of key Government Maternal and Child Health (MCH) programs, including JSY, PMSMA, PMMVY, and ICDS. However, 38% exhibited poor knowledge, reflecting limited awareness of service entitlements, eligibility criteria, and program components.

This knowledge gap may stem from low literacy levels, insufficient health education, and infrequent engagement with frontline health workers such as ASHAs and ANMs. The findings highlight the urgent need for strengthened IEC strategies, including culturally adapted communication tools and structured awareness sessions during antenatal visits, to improve maternal health literacy and program uptake.

III. Perception Ratings

Table 3: Perception Ratings Toward Government MCH Services (n = 200)

Perception Category	Score Criteria	Frequency (n)	Percentage (%)	Key Themes Reported
Positive Perception	≥ 7 out of 10	148	74%	Trust in ASHA workers, free ANC services, clean facilities
Neutral/Negative Perception	< 7 out of 10	52	26%	Overcrowding, long wait times, lack of personalized attention

Out of 200 pregnant women surveyed, 74% expressed a positive perception of government Maternal and Child Health (MCH) services. These women appreciated the availability of free antenatal check-ups, support from ASHA workers, and cleanliness of urban health centers. Such favorable views reflect a general satisfaction with service accessibility and quality, suggesting that core components of programs like PMSMA and JSY are being effectively delivered in Vadodara.

However, 26% of respondents reported neutral or negative perceptions, citing overcrowded facilities, long waiting times, and lack of personalized care as major concerns. These issues may hinder consistent utilization and trust in public health services, especially among women with prior exposure to private care or higher expectations of service delivery.

The findings indicate that while the structural availability of services is commendable, there is a need to enhance patient experience, particularly through staff training in respectful maternity care, streamlining clinic workflows, and increasing community feedback mechanisms.

IV. Statistical Associations

Inferential analysis revealed several significant associations between socio-demographic variables and knowledge/perception scores:

Variable	p-value	Significance
Education Level	0.003	Statistically Significant
Parity	0.021	Statistically Significant
ASHA Contact Frequency	0.001	Highly Significant
ANC Visit Frequency	$r = 0.42, p < 0.01$	Moderate Positive Correlation

- Education Level was significantly associated with knowledge scores, indicating that women with higher education were more likely to be informed about MCH programs.
- Parity showed a significant relationship, with multigravida women demonstrating slightly higher awareness, possibly due to prior exposure to health services.
- ASHA Contact Frequency emerged as a highly significant factor, reinforcing the pivotal role of frontline health workers in disseminating information and shaping perceptions.
- ANC Visit Frequency showed a moderate positive correlation with perception scores, suggesting that regular engagement with health services enhances trust and satisfaction.

These associations validate the importance of education, experience, and community health worker engagement in improving maternal health literacy. The findings advocate for strengthening ASHA-led outreach and integrating structured health education into routine ANC visits.

DISCUSSION

The present study revealed a moderate level of knowledge (62%) and a high level of positive perception (74%) regarding Government Maternal and Child Health (MCH) programs among pregnant women in Vadodara city. These findings suggest that while most women are receptive to public health services and view them favorably, significant gaps remain in their understanding of program components, eligibility criteria, and entitlements.

One of the most salient determinants of knowledge was educational attainment, with statistically significant associations ($p = 0.003$) indicating that women with secondary or higher education were more likely to possess adequate awareness of schemes such as Janani Suraksha Yojana (JSY), Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), and Integrated Child Development Services (ICDS). This aligns with findings from Mehta et al. (2023), who reported similar trends in urban Gujarat, where maternal literacy strongly predicted ANC service uptake and program awareness.

Another critical factor was engagement with frontline health workers, particularly ASHAs, whose contact frequency showed a highly significant association with knowledge scores ($p =$

0.001). This reinforces the role of community health workers as pivotal agents in bridging the gap between policy and practice. Studies by Bakshi et al. (2024) and Vidya et al. (2024) have similarly emphasized the importance of ASHA-led health education in improving maternal health literacy and service utilization.

Interestingly, perception scores were positively correlated with ANC visit frequency ($r = 0.42$, $p < 0.01$), suggesting that repeated exposure to health services enhances trust, satisfaction, and perceived quality. Women who attended multiple ANC sessions were more likely to report favorable views on service accessibility, cleanliness, and staff behavior. However, qualitative feedback from 26% of respondents indicated dissatisfaction due to overcrowding, long wait times, and lack of personalized care—issues that may undermine the effectiveness of otherwise well-structured programs.

These findings underscore the need for culturally tailored Information, Education, and Communication (IEC) strategies that go beyond generic awareness campaigns. Contextualizing health messages in local languages, leveraging community influencers, and integrating Garbha Sanskar principles where appropriate may enhance receptivity and retention. Moreover, strengthening the capacity of ASHAs and ANMs to deliver structured, evidence-based education during ANC visits can significantly improve maternal engagement.

From a policy perspective, the study highlights the importance of patient-centered service delivery, where technical adequacy is complemented by respectful maternity care and responsive infrastructure. Incorporating feedback mechanisms, reducing wait times, and ensuring continuity of care can further elevate perception and utilization.

In summary, while Vadodara's urban health centers demonstrate commendable reach and acceptance, knowledge gaps and service delivery bottlenecks persist. Addressing these through targeted education, frontline engagement, and system-level improvements is essential to realizing the full potential of India's maternal health programs.

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