TPM Vol. 32, No. S8, 2025
ISSN: 1972-6325
https://www.tpmap.org/

Open Access

AN ANALYTICAL STUDY ON THE IMPACT OF SOCIOECONOMIC FACTORS AND HEALTH LITERACY ON THE UTILIZATION OF MATERNAL HEALTHCARE SERVICES IN DELHI NCR

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ABSTRACT

Background: Socioeconomic status and health literacy are key determinants of maternal health outcomes and central to achieving India's Sustainable Development Goals (SDGs). Although India has implemented multiple flagship maternal health programs, the country still accounts for nearly 12% of global maternal deaths, highlighting gaps in service utilization, especially in urban fringes and peri-urban regions. This study examines the effect of socioeconomic factors and health literacy on the utilization of maternal healthcare services in the Delhi NCR region.

Methods: Primary data were collected using a quota sampling method to ensure balanced representation across socio-economic strata and residential clusters (urban, semi-urban, and peri-urban) in Delhi NCR. The final sample comprised 400 women of reproductive age. Data were gathered through a well-structured questionnaire, which was pre-tested through a pilot survey to assess reliability and refine questions.

Results: The findings reveal that higher education levels, better income, and greater health literacy significantly increase the utilization of maternal healthcare services. Regression results show that socioeconomic status explains 85.9% of the variance in service utilization, while health literacy accounts for 56.7%. Despite proximity to health facilities, low insurance coverage and limited awareness of government schemes such as JSY and PMMVY hinder full uptake, particularly among marginalized groups.

Conclusion: Improving maternal health in urbanized regions like Delhi NCR requires more than physical infrastructure alone. Strengthening awareness, expanding insurance coverage, and building trust in public healthcare are vital to bridging the existing gaps. Community-based health education and enhanced outreach through frontline health workers can help achieve equitable maternal health outcomes and support India's SDG targets.

Keywords: Maternal healthcare utilization, Socioeconomic factors, Health literacy, Urban health, Quota sampling, Pilot survey, Delhi NCR, India.

INTRODUCTION

In rapidly urbanizing regions of India, where economic disparities and educational inequalities persist, the utilization of maternal healthcare services is often shaped less by availability and more by a woman's socioeconomic status and level of health literacy.

Improving maternal health remains a global priority and is central to achieving the Sustainable Development Goals (SDGs), particularly in low- and middle-income countries. Maternal healthcare is a fundamental pillar for enhancing the wellbeing of mothers and children, while also playing a critical role in advancing national health targets and fostering social development. In India, despite the implementation of multiple flagship programs targeting maternal and child health, the country still accounts for nearly 12% of global maternal deaths, with an estimated 30,000 women dying annually from pregnancy-related causes[1]. According to the National Family Health Survey-5 (2019–21), institutional deliveries have risen to 88.6% at the national level[2]. However, persistent

[1] **Sample Registration System Bulletin 2023**, 'Maternal Mortality in India: 2018–2020' (Office of the Registrar General & Census Commissioner, India) https://censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR%20Bulletin%202018-20.pdf accessed 18 July 2025.

[2] **Ministry of Health and Family Welfare**, *National Family Health Survey (NFHS-5), 2019–21* (International Institute for Population Sciences) http://rchiips.org/nfhs/NFHS-5_FCTS/India.pdf accessed 18 July 2025.

disparities—especially in urban fringes and among marginalized populations—underscore the limitations of current interventions. These inequalities are strongly influenced by socio-economic status and health literacy, which shape women's ability to access, understand, and effectively utilize maternal health services. Addressing these structural and informational barriers is essential for achieving equitable maternal health outcomes and sustainable public health progress in India**.**

The situation in Delhi NCR presents a paradox: on the one hand, it is a hub of advanced healthcare infrastructure, with some of India's best public and private hospitals; on the other, pockets of peri-urban and rural settlements reveal gaps in equitable healthcare reach, uptake, and outcomes.

Despite programs like Janani Suraksha Yojana (JSY) and Pradhan Mantri Matru Vandana Yojana (PMMVY), the Maternal Mortality Ratio (MMR) in Delhi stands at 95 per 100,000 live births, better than the national average of 97 but still worrying for an urbanized capital region[3]. Factors like low insurance penetration, lack of awareness, and deep-rooted social norms hinder full utilization of available services. Moreover, the phenomenon of women preferring expensive private care despite the presence of subsidized government facilities points to larger questions of perceived quality, trust, and structural inequities.

Therefore, this study critically investigates how socioeconomic variables—education, income, occupation—and health literacy interact to shape healthcare-seeking behavior in Delhi NCR Unlike prior research that primarily focuses on improving physical infrastructure, this study's novelty lies in examining whether mere proximity to healthcare services is sufficient without addressing the informational, social, and financial barriers that continue to limit equitable access. By collecting fresh, primary data from a robust sample of 400 women across urban, semi-urban, and peri-urban clusters, the study offers significant insights to fill the micro-level evidence gap for policymakers and practitioners. The findings are expected to inform more targeted strategies for bridging last-mile disparities, enhancing community awareness, and strengthening trust in public health systems, thus directly contributing to India's Sustainable Development Goal commitments. Specifically, the study aims to (i) explore the demographic and socioeconomic characteristics of women in Delhi NCR, (ii) examine the impact of socioeconomic factors on maternal healthcare service utilization, and (iii) assess the influence of health literacy and awareness on healthcare-seeking behavior.

The remainder of this manuscript is organized into five sections. The first section introduces the context, research gap, and purpose of the study. The second section presents a comprehensive literature review covering existing research on maternal healthcare utilization and its determinants. The third section details the methodology, including sampling strategy, data collection, and analytical tools used. The fourth section provides a detailed analysis and interpretation of the primary data. Finally, the fifth section concludes with key findings, implications for policy and practice, and recommendations for addressing the socioeconomic and informational barriers to maternal healthcare utilization in Delhi NCR.

LITERATURE REVIEW

The use of maternal healthcare changes based on complex socioeconomic, cultural, and institutional interactions. It has been confirmed by several studies that the increased level of maternal education, household income and availability of health insurance are related to increasing rate of uptake of both antenatal and postnatal care (Singh & Prasad, 2024). Women who have attained a medium or higher level of education can better understand medical advice and understand nutritional needs and make timely decisions on institutional deliveries (Bello et al., 2022). According to a study by Mehta et al. (2023), it was observed that knowledge of government schemes providing maternal healthcare, including "Janani Suraksha Yojana (JSY) and Pradhan Mantri Matru Vandana Yojana (PMMVY)", played an essential role in determining the healthcare seeking behavior, particularly among low-income families. Nonetheless, the information disclosure inefficiency, some flaws in the quality of services, etc. usually deterred efficient employment of these schemes. Likewise, C.B. Bello et al. (2022) emphasized that health literacy determined maternal outcomes, with the higher the health literacy level, the more chances of mothers to make a request to obtain a regular antenatal checkup and skilled delivery services.

Sociologically, Monica Singh (2022) identified the role of cultural norms and family support on access to healthcare in her paper on the case of Lodha people in Uttar Pradesh. She claimed that women were easily put off in accessing institutionalized healthcare by the traditional mode of doing things and a patriarchal decision support system, although physically accessible.

Extensive research globally and in India emphasizes that maternal healthcare utilization is shaped by an intersection of social, economic, cultural, and institutional factors. According to Navaneetham and Dharmalingam (2002), higher income and education levels directly correlate with more frequent antenatal visits, safer deliveries, and better postnatal care. Similar findings were reinforced by Say et al. (2014) in their WHO systematic analysis, which linked low maternal mortality rates to robust institutional delivery coverage and effective outreach.

[3] **Sample Registration System Bulletin 2022**, 'Special Bulletin on Maternal Mortality in India 2018–20' (Office of the Registrar General, India) https://censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR%20Bulletin%202018-20.pdf accessed 18 July 2025."

However, even in resource-abundant regions, utilization can lag if service quality and trust are compromised. Bhattacharyya et al. (2016) showed in West Bengal that women often bypassed local public clinics due to perceived poor quality, preferring private facilities or traditional midwives despite higher costs. This indicates that accessibility must be complemented by perceived reliability and cultural acceptability.

Kumar et al. (2019) highlighted that in urban slums of Delhi, although over 80% of women lived within 2 km of a healthcare facility, over one-third still gave birth at home due to mistrust of government hospitals and unawareness of entitlements under JSY. This mirrors the gaps observed by Mehta et al. (2023) in the uptake of government schemes, where awareness often remained limited to literate or urban households, leaving peri-urban and migrant communities uninformed.

Another dimension is intra-household decision-making power. Chattopadhyay (2012) argued that in patriarchal households, husbands and mothers-in-law often dictate whether and when women access care, regardless of their own education level. Monica Singh's (2022) study on the Lodha community aligns with this, showing that deep-seated customs and gender roles can override economic incentives and physical access.

International comparisons reveal the same pattern. For example, Bello et al. (2022) in Nigeria and Fagbamigbe et al. (2017) in Sub-Saharan Africa found that maternal health literacy was a stronger predictor of safe delivery than proximity to a facility alone. Moreover, women who could comprehend health messages were more likely to challenge harmful norms, insist on skilled birth attendance, and seek postnatal care.

Contrastingly, a few studies point to infrastructure as a continuing bottleneck in remote rural contexts. Navaneetham and Dharmalingam (2002) found that in Southern India's tribal belts, terrain and transport were still major barriers. However, in urban clusters like Delhi NCR, where physical access is less constrained, the relative weight of literacy, awareness, and cultural factors becomes more prominent.

Emerging scholarship also critiques the one-size-fits-all approach of public schemes. Baru et al. (2021) argue that while schemes like JSY have increased institutional deliveries, they do little to improve the quality of care or postnatal support. They stress the risk of 'conditional cash transfers' promoting superficial compliance rather than informed, long-term maternal health engagement.

In summary, while infrastructure, income, and insurance coverage matter, the evidence strongly suggests that without targeted efforts to raise maternal health literacy, strengthen trust in public health systems, and dismantle social barriers, the full potential of India's maternal health policies will remain unrealized. This study situates itself within this gap, contributing fresh data from Delhi NCR to test whether prevailing policy assumptions hold in a complex urban-peripheral setting.

Table 1. Summary of Key Literature on Maternal Healthcare Utilization

Author(s)	Study Area	Key Focus	Main Findings
Singh & Prasad (2024)	India (General)	Socioeconomic factors influencing antenatal & postnatal care uptake	Higher education, income, and insurance increase utilization rates.
Bello et al. (2022)	Nigeria	Maternal health literacy and pregnancy outcomes	High literacy improves regular antenatal check-ups and skilled deliveries.
Mehta et al. (2023)	India	Awareness and use of JSY, PMMVY schemes	Knowledge of schemes improves utilization, but flaws in delivery and outreach limit impact.
Singh, M. (2022)	Uttar Pradesh (India)	Cultural norms among Lodha community	Patriarchal norms and traditional practices hinder institutional care, despite physical access.
Navaneetham & Dharmalingam (2002)	Southern India	Socioeconomic status and service utilization in rural areas	Higher income and education increase antenatal/postnatal visits; rural terrain remains a barrier.
Say et al. (2014) (WHO)	Global	Causes of maternal deaths worldwide	Strong link between institutional delivery coverage and lower maternal mortality.
Bhattacharyya et al. (2016)	West Bengal, India	Quality perception and service choice	Poor quality perception of public clinics drives preference for private/traditional options.
Kumar et al. (2019)	Urban Slums, Delhi	Barriers despite proximity	80% live within 2 km of a facility, yet home births persist due to mistrust and poor awareness.
Chattopadhyay (2012)	India (General)	Intra-household decision-making power	Husbands and mothers-in-law often control care-seeking, limiting women's agency despite education.
Fagbamigbe et al. (2017)	Sub-Saharan Africa	Role of literacy vs. physical access	Literacy stronger predictor of safe delivery than distance; empowered mothers demand better care.

Baru et al. (2021)	India (General)	Critique of JSY and conditional cash transfer schemes	Increased institutional deliveries but limited improvement in quality and follow-up; risk of superficial compliance rather than real empowerment.

Identified Research Gaps

Despite extensive policy efforts and the presence of advanced healthcare infrastructure in Delhi NCR, significant gaps persist in understanding how socioeconomic status and health literacy interact to influence maternal healthcare utilization:

1. Gap 1: Limited Micro-Level Evidence on Urban-Periurban Disparities

While many national and state-level studies focus on rural-urban differences, there is limited empirical research capturing disparities within an urbanized region like Delhi NCR—particularly among urban, semi-urban, and peri-urban clusters. This leaves a gap in evidence for policymakers to design location-specific interventions to bridge intra-regional inequities.

2. Gap 2: Inadequate Focus on Health Literacy as a Mediator

Most existing studies emphasize physical access and economic factors but pay insufficient attention to health literacy as an independent and mediating variable. Understanding how awareness levels and informational barriers affect the uptake of maternal services, despite physical proximity, remains under-researched in the context of Delhi NCR's mixed healthcare landscape.

METHODOLOGY

Sampling and Data Collection

A structured questionnaire (n=400) was administered across five regions of Delhi NCR: Delhi, Noida, Ghaziabad, Gurgaon, and Faridabad. Quota sampling ensured representation across socio-economic strata.

Data Analysis

SPSS v26 was employed to perform frequency analysis, reliability testing (Cronbach's alpha), and regression analysis. The constructs measured included demographic details, socioeconomic variables, health literacy, and utilization patterns.

Data Analysis and Interpretation

This section presents the statistical analysis of the primary data collected from 400 respondents across Delhi NCR. The analysis includes demographic profiling, socioeconomic characteristics, healthcare utilization trends, and regression outputs. Microsoft Excel and SPSS v26 were employed to generate descriptive and inferential statistics.

Demographic Profile of Respondents

The respondents were women of reproductive age, primarily married, with a significant share residing in urban areas of Delhi NCR. The detailed distribution is presented below:

Table 1. Age Distribution of Respondents

The age data shows that the largest group of respondents were aged between 25–29 years, a typical childbearing age, indicating active healthcare demand.

Age Group	Frequency	Percentage (%)
21–24 years	68	17.0
25–29 years	133	33.3
30–34 years	94	23.5
35 years & above	105	26.3
Total	400	100.0

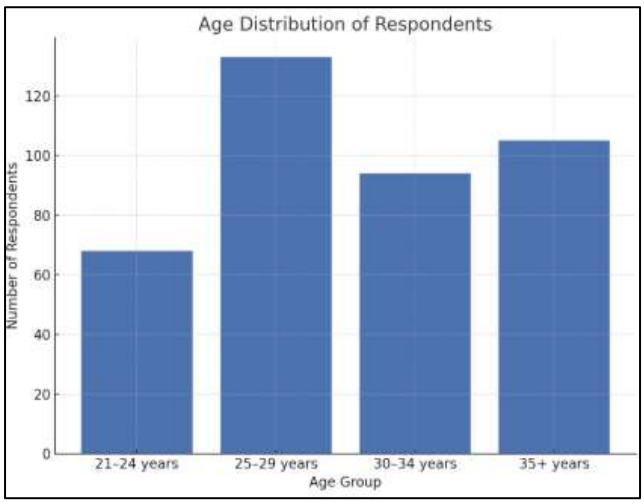

Figure 1. Age Distribution of Respondents

Table 2. Marital Status
A dominant share (94.3%) of the participants were married, reaffirming the relevance of maternal healthcare evaluation in this sample.

Marital Status	Frequency	Percentage (%)
Married	377	94.3
Widowed	13	3.3
Divorced/Separated	10	2.5
Total	400	100.0

Educational and Economic Characteristics
Educational attainment significantly influences healthcare literacy and decision-making.

Table 3. Education Levels
The majority (63.8%) of women were graduates or higher, indicating an educated respondent base, ideal for assessing health literacy.

Education Level	Frequency	Percentage (%)
Primary (1st–10th)	44	11.0
Higher Secondary	101	25.3
Graduate	162	40.5
Postgraduate & above	93	23.3
Total	400	100.0

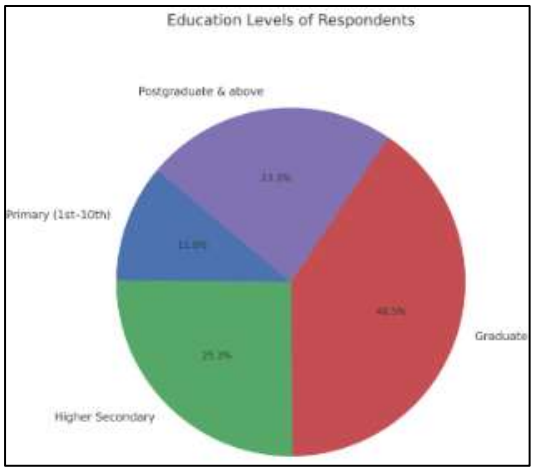

Figure 2. Education Levels of Respondents

Table 3. Monthly Household Income
Income distribution suggests that nearly 49.6% of women fell within the mid- to high-income categories, which could influence private healthcare utilization.

Income Bracket	Frequency	Percentage (%)
Below ₹10,000	48	12.0

₹10,000–₹20,000	70	17.5
₹20,001–₹40,000	113	28.3
₹40,001–₹60,000	84	21.0
Above ₹60,000	85	21.3
Total	400	100.0

Healthcare Access and Usage

Table 4. Distance to Nearest Healthcare Facility

Distance	Frequency	Percentage (%)
<1 km	141	35.3
1–3 km	130	32.5
3–5 km	65	16.3
>5 km	64	16.0
Total	400	100.0

Despite proximity to healthcare facilities for most women, utilization was affected by cost, transport, and awareness factors.

Table 5. Type of Facility Used

Facility Type	Frequency	Percentage (%)
Government hospital/clinic	155	38.8
Private hospital/clinic	205	51.3
NGO/Charitable clinic	40	10.0
Total	400	100.0

Private healthcare dominates in usage, indicating perceived or actual inadequacy in government services or a preference for perceived quality care.

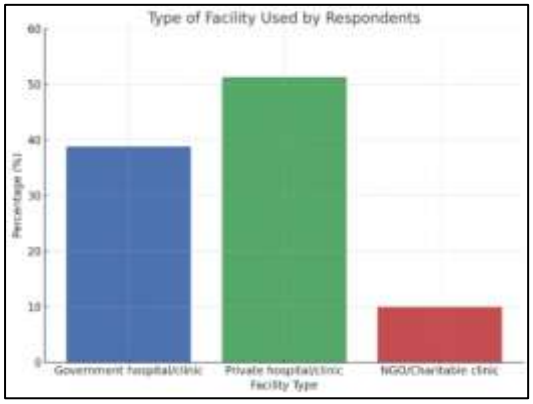

Figure 4. Type of Facility Used by Respondents

Health Insurance and Scheme Awareness

Table 5. Health Insurance Coverage

Insurance Status	Frequency	Percentage (%)
Yes	65	16.3
No	335	83.8
Total	400	100.0

The low penetration of health insurance underlines a significant barrier to financial accessibility for maternal services.

Table 5. Awareness of Government Maternal Schemes

Awareness Status	Frequency	Percentage (%)
Aware & availed	**120**	**30.0**
Aware but Not Availed	**86**	**21.5**
Not Aware	**194**	**48.5**
Total	**400**	**100.0**

Nearly half the respondents were unaware of government schemes like JSY or PMMVY, showing an urgent need for better outreach mechanisms.

DISCUSSION

This study explains little about the relationship between socioeconomic determinants and the level of awareness and maternal healthcare utilization in the Delhi NCR region. The region is characterized by an urban sprawl, economic diversity and access to both public and private healthcare systems, which offer good context to explore the barriers and enablers towards uptake of maternal health services. The quantitative findings are discussed in detail below and placed in conversation with sociological theory and the body of work on public health.

Demographic Realities and Profile of Maternal Age

Age wise, the highest percentage of women (33.3) belonged to the age bracket of 25-29 years followed by 35 and above 26.3 percent. This states that it is a mature generation of women around reproduction age, ages that are considered most important in prenatal and postnatal care. The limited number of adolescent pregnancies in the data may indicate more education and post-marriage trends in the NCR-urban areas. The results are consistent with the WHO stance that maternal outcomes improve greatly among women in their late 20s leading to the possible conclusion that the study sample is well-situated to enjoy the effects of well-built maternal care frameworks.

Social Determinants of Marital Status and Education

The high percent (94.3%) of the number of married women provides evidence to the intended nature of government programs such as JSY and PMMVY, which focus on married women. Notably, one of the significant social determinants was educational level. About 64 percent of the respondents possessed a graduate degree or more. This is important in the sense that education empowers the women to identify complications, understand medical recommendations, and interact with medical personnel with confidence. It also makes women more likely to ask for quality care and oppose harmful traditional practices, which is also true in Rajasthan and Madhya Pradesh (Jat & Sebastian, 2013).

Economic Status and Healthcare Choices

Economic stratification of respondents indicated that nearly half of them had a household income of more than 40,000. This is consistent with the high use (51.3%) of the private hospitals, which despite their higher cost are seen as providing higher quality care. On the contrary, only 38.8 percent used government facilities, which are affordable and strategically located. This discovery is crucial in that it indicates that universal maternal health systems are not likely to instill a level of trust or satisfaction on middle- and high-income women. This highlights a dichotomy as well, where individuals with disposable income will not use the government sector, this risks underutilization of government investment in maternal care infrastructure.

In addition, only 16.3 percent of women were insured. Insurance penetration is pathetic notwithstanding schemes such as Ayushman Bharat and state health cards. Lack of insurance cover leads to out of pocket spending, which puts low-income women off institutional delivery or follow-ups. This economic marginalization itself defies the target of the sustainable development goals (SDG 3.1), whose aim is to decrease the global death rate among mothers.

Geographic and Structural Accessibility

Even though a substantial percentage (67.8) lived in nuclear families, a subset of which potentially limits the provision of social support required in maternal care, a large number lived in urban areas (69.5), which in general offer proximity to health facilities. Approximately 35.3 per cent resided under 1 km of a facility implying that structural accessibility is not the most significant challenge in the area. But even 65 percent were affected by distance, particularly in semi urban or peripheral areas of the NCR where transport cost, commuting time, and clinic timings hamper access. Such findings highlight the importance of local policy reaction over a universal approach.

Maternal Health Literacy and Service Uptake

The regression analysis yielded compelling evidence that both socioeconomic status ($R^2 = 0.859$) and health literacy ($R^2 = 0.567$) significantly influence healthcare utilization. A higher level of awareness translated to increased uptake of services such as antenatal checkups, institutional delivery, and postnatal visits. Yet, paradoxically, nearly half the respondents (48.5%) were unaware of government schemes designed precisely for their benefit. This gap in awareness, especially among rural or less literate groups, highlights a glaring communication failure in the public health apparatus.

While frontline workers like ASHA and ANM staff are meant to be the information vectors, the data suggests that their outreach is either inconsistent or ineffectively tailored. This echoes the findings of Mehta et al. (2023), who noted low scheme penetration in urban slums despite high density and proximity to government hospitals.

Hypothesis Testing and Regression Analysis

Impact of Socioeconomic Factors

1. **H_{01}:** There is no significant impact of socioeconomic factors on the utilization of maternal healthcare services.

2. **Result:** Rejected ($R^2 = 0.859$, $F = 2429.78$, $p < 0.001$)
3. **Interpretation:** Socioeconomic factors explain 85.9% of the variance in healthcare utilization. The standardized coefficient ($\beta = 0.927$) indicates a strong positive influence.

Key Observations:

1. Higher education improves awareness of antenatal and postnatal care.
2. Higher income allows affordability of quality services and transportation.
3. Employment provides financial independence and decision-making power.

Impact of Awareness and Health Literacy

1. **H_{02}:** There is no significant effect of awareness and health literacy on maternal healthcare utilization among different socio-economic groups.
2. **Result:** Rejected ($R^2 = 0.567$, $F = 522.12$, $p < 0.001$)
3. **Interpretation:** Awareness and literacy explain 56.7% of the variance. The coefficient ($\beta = 0.763$) suggests a positive impact.

Key Observations:

1. Ability to read health pamphlets and understand nutrition improves antenatal care adherence.
2. Awareness of schemes (e.g., JSY, PMMVY) motivates institutional delivery and follow-up visits.

CONCLUSION

The purpose of this research was to examine the key variables of affecting the use of maternal health care in Delhi NCR and pay attention to the social economic factors and health literacy. The results indicate the fact that the highest percentage of the population lives in the city (relatively close to the healthcare facility) but the accessibility does not imply the use. Education, income, occupation and the awareness are major criteria in influencing the maternal health seeking behavior.

The more educated and higher income society females were, the more chances of their use of the group of antenatal, delivery, and postnatal services with the tendency of receiving them in the form of paying to the healthcare institution although free government facilities were available to them. In addition, absence of health insurance cover and low knowledge of government schemes proved to be a big impediment even amongst the low income and less educated people. The regression analysis verified this correlation, as socioeconomic status was strongly and positively correlated with the healthcare utilization (R2 = 0.859), and very strongly with the awareness (R2 = 0.567) utilization.

The study reveals that, to increase maternal health outcomes, the problem is larger than infrastructure: it reacts to specific measures to ameliorate awareness, insurance coverage, and faith in public health entities. The gap between the service delivery and service consumption can be narrowed greatly by community-based health education and increased distribution of the information on the scheme through ASHA workers and in the local media.

To wrap up my discussion, it is necessary to implement the approach aimed at overcoming both the economic and the informational barriers to provide the maternal healthcare on the level playing field. The policymakers have to follow a multi-mission strategy where women will be armed with information, lowered risk of financial transactions, and uphold the quality of services in all socio-economic strata in Delhi NCR.

REFERENCES

1. Bello, C. B., Esan, D. T., Akerele, S. A., & Fadare, R. I. (2022). Maternal health literacy, utilisation of maternal healthcare services and pregnancy outcomes among newly delivered mothers: A cross-sectional study in Nigeria. Public Health in Practice, 3, 100266. https://doi.org/10.1016/j.puhip.2022.100266
2. Mehta, B. S., Alambusha, R., Misra, A., Mehta, N., & Madan, A. (2023). Assessment of utilisation of government programmes and services by pregnant women in India. PLOS ONE, 18(10), e0285715. https://doi.org/10.1371/journal.pone.0285715
3. Navaneetham, K., & Dharmalingam, A. (2002). Utilization of maternal health care services in Southern India. Social Science & Medicine, 55(10), 1849–1869. https://doi.org/10.1016/S0277-9536(01)00313-6
4. Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A. B., Daniels, J., ... & Alkema, L. (2014). Global causes of maternal death: a WHO systematic analysis. The Lancet Global Health, 2(6), e323-e333. https://doi.org/10.1016/S2214-109X(14)70227-X
5. Singh, M. (2022). Socio-Cultural Determinants of Maternal Health in India: A Sociological Study of the Lodha Block, District Aligarh, Uttar Pradesh [Doctoral dissertation, Aligarh Muslim University]. http://hdl.handle.net/10603/501319
6. Singh, J., & Prasad, S. (2024). Examining socioeconomic factors influencing maternal health in pregnancy. Journal of Human Behavior in the Social Environment, 1–19. https://doi.org/10.1080/10911359.2024.2310272
7. Bhattacharyya, S., Issac, A., Rajbangshi, P., & Srivastava, A. (2016). Maternal healthcare scenario in urban slums of India. Journal of Urban Health, 93(1), 96–106. https://doi.org/10.1007/s11524-015-0019-5
8. Kumar, S., Dansereau, E., & Murray, C. J. L. (2019). Does distance matter for institutional delivery in rural India? Applied Economics, 51(55), 5876–5893. https://doi.org/10.1080/00036846.2019.1646400

9. Chattopadhyay, A. (2012). Men in maternal care: Evidence from India. Journal of Biosocial Science, 44(2), 129–153. https://doi.org/10.1017/S0021932011000502
10. Fagbamigbe, A. F., Idemudia, E. S., & Akinyemi, J. O. (2017). Maternal health literacy and maternal health care utilization among Nigerian women. BMC Pregnancy and Childbirth, 17(1), 1–13. https://doi.org/10.1186/s12884-017-1501-5
11. Baru, R. V., Acharya, A., Acharya, S., Kumar, A. K. S., & Nagaraj, K. (2021). Inequities in Access to Health Services in India: Caste, Class and Region. Economic and Political Weekly, 56(7), 45–53. https://www.epw.in/journal/2021/7/special-articles/inequities-access-health-services-india.html"