Section: Community Medicine

Original Research Article

IMPACT OF COMMUNITY-BASED WOMEN'S EMPOWERMENT INITIATIVES ON MATERNAL AND CHILD HEALTH OUTCOMES IN URBAN AND RURAL TAMIL NADU, INDIA: A MIXED-METHODS STUDY

S Latha Maheshwari[1], R G Anand[2], Yamuna[1], Jayalakshmi[3]

[1]*Associate Professor, Department of Community Medicine, Government Medical College, Omandurar, Chennai, Tamil Nadu, India*
[2]*Professor, Department of Community Medicine, Narayana Medical College, Nellore, Andhra Pradesh, India*
[3]*Tutor, Department of Community Medicine, Government Medical College, Omandurar, Chennai, Tamil Nadu, India*

Received *: 30/10/2025*
Received in revised form *: 12/12/2025*
Accepted *: 31/12/2025*

Corresponding Author:
Dr. S Latha Maheshwari,
Associate Professor, Department of Community Medicine, Government Medical College, Omandurar, Chennai, Tamil Nadu, India.
Email: drlathambbsmd@rediff.com

DOI: 10.70034/ijmedph.2026.1.29

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2026; 16 (1); 159-163

ABSTRACT

Background: Women's empowerment is increasingly recognized as a critical social determinant of maternal and child health, particularly in low- and middle-income countries. In India, community-based empowerment initiatives—often implemented through non-governmental organizations and Corporate Social Responsibility (CSR) programs—aim to enhance women's autonomy, economic security, and health-seeking behavior. However, robust empirical evidence linking such interventions to measurable maternal and child health outcomes remains limited, especially across urban–rural contexts.

Materials and Methods: A community-based mixed-methods study was conducted in selected urban and rural areas of Tamil Nadu where structured women's empowerment programs had been operational for at least two years. Quantitative data were collected through a cross-sectional survey of 400 women aged 15–49 years with at least one child under five years of age. Maternal healthcare utilization, child immunization status, and child nutritional indicators were assessed. Multivariable logistic regression was used to examine associations between program participation and health outcomes. Qualitative data were obtained through in-depth interviews and thematically analysed to explore pathways linking empowerment and health behaviours.

Results: Women participating in empowerment initiatives demonstrated significantly higher odds of completing recommended antenatal care visits (adjusted OR: 2.3; 95% CI: 1.6–3.4) and ensuring full immunization of their children (adjusted OR: 1.9; 95% CI: 1.2–3.0) compared to non-participants. Qualitative findings revealed enhanced decision-making autonomy, increased confidence in navigating health systems, and improved household-level prioritization of maternal and child health.

Conclusion: Community-based women's empowerment initiatives are positively associated with improved maternal and child health outcomes in both urban and rural settings. Integrating empowerment strategies within existing health systems and scaling them in underserved regions may accelerate progress toward health equity and Sustainable Development Goals related to gender equality and maternal and child health.

Keywords: Women's empowerment; Maternal health; Child health; Community-based interventions; Tamil Nadu; Health equity.

INTRODUCTION

Despite substantial progress in maternal and child health indicators over recent decades, preventable maternal and child morbidity and mortality remain pressing public health challenges in India.[1] Social determinants—including gender inequality, limited female autonomy, and restricted access to

resources—continue to influence health outcomes, particularly among women from socio-economically disadvantaged backgrounds.[2]

Women's empowerment is a multidimensional construct encompassing access to education, economic independence, decision-making autonomy, and social participation. Evidence suggests that empowered women are more likely to utilize healthcare services, adopt healthy practices, and advocate for their children's wellbeing.[3] In India, Tamil Nadu has implemented several women-centric initiatives through self-help groups, microfinance programs, skill-development schemes, and health education platforms, often supported by CSR funding.[3]

While these initiatives are widely perceived as beneficial, empirical evaluations linking empowerment interventions to objective maternal and child health outcomes remain sparse. Furthermore, differences in program impact between urban and rural settings are inadequately explored.[4] This study addresses this gap by systematically examining the association between community-based women's empowerment initiatives and key maternal and child health indicators in Tamil Nadu using a mixed-methods approach.[5]

MATERIALS AND METHODS

Study Design and Setting: A convergent mixed-methods study design was employed, integrating quantitative cross-sectional analysis with qualitative inquiry to comprehensively examine the relationship between women's empowerment initiatives and maternal and child health outcomes. The study was conducted in purposively selected urban and rural communities in Tamil Nadu where structured women's empowerment programs—encompassing health education, livelihood support, and social mobilization—had been implemented continuously for a minimum duration of two years prior to data collection. This approach enabled simultaneous triangulation of numerical outcomes with experiential insights.

Study Population: The study population comprised women aged 15–49 years who had at least one child under five years of age and had been residing in the selected study areas for a minimum period of one year. This criterion ensured adequate exposure to empowerment initiatives and local health services. Women who were severely ill at the time of the survey or unable to provide informed consent were excluded from participation to maintain ethical and data quality standards.

Sample Size and Sampling Technique: The sample size was calculated based on an assumed prevalence of 50% for adequate maternal healthcare utilization among women participating in empowerment initiatives, with a 5% absolute precision and a 95% confidence level. After accounting for potential non-response, the final sample size was estimated at 400 participants. A multistage sampling technique was adopted, involving purposive selection of program-implementing areas followed by random selection of households within these areas. Eligible women from selected households were then recruited for the study.

Data Collection Procedures: Quantitative data were collected using a pretested structured questionnaire administered through face-to-face interviews. The questionnaire captured information on socio-demographic characteristics, participation in women's empowerment initiatives, utilization of antenatal, intranatal, and postnatal care services, child immunization status, and child nutritional indicators. To complement the quantitative findings, qualitative data were gathered through semi-structured in-depth interviews conducted with a purposively selected subset of participants. These interviews explored participants' perceptions, lived experiences, and perceived mechanisms through which empowerment initiatives influenced health-seeking behaviours and decision-making.

Study Variables: Participation in women's empowerment initiatives was considered the primary independent variable. The primary outcome variables included adequacy of antenatal care, utilization of postnatal care services, completeness of child immunization, and child nutritional status. Potential confounding variables such as age, educational attainment, socioeconomic status, and place of residence (urban or rural) were treated as covariates in the analysis.

Statistical Analysis: Quantitative data were entered and analysed using Statistical Package for the Social Sciences (SPSS), version 25. Descriptive statistics were used to summarize participant characteristics and key outcome variables. Associations between empowerment initiative participation and maternal and child health outcomes were examined using logistic regression analysis, with results presented as crude and adjusted odds ratios along with corresponding 95% confidence intervals. Qualitative data were analysed using thematic analysis following an inductive approach, allowing themes to emerge organically from the data through systematic coding and interpretation.

Ethical Considerations: Ethical clearance for the study was obtained from the Institutional Ethics Committee prior to commencement of data collection. Written informed consent was obtained from all participants after explaining the objectives, procedures, potential benefits, and confidentiality measures associated with the study. Participant anonymity and data confidentiality were strictly maintained throughout the research process.

RESULTS

Socio-Demographic Characteristics of Study Participants: A total of 400 women were included in the analysis, of whom 212 (53.0%) had participated in community-based women's empowerment

initiatives, while 188 (47.0%) had not. The mean age of participants was 28.9 ± 5.7 years. A higher proportion of women in the empowerment group had attained secondary education or above and belonged to higher socioeconomic strata compared to non-participants.

Table 1: Socio-demographic profile of participants by empowerment program participation (N = 400)

Variable	Non-participants (n = 188)	Participants (n = 212)	Total (N = 400)
Age (years)			
Mean ± SD	29.4 ± 5.9	28.5 ± 5.4	28.9 ± 5.7
Education level			
Primary or less	72 (38.3%)	41 (19.3%)	113 (28.3%)
Secondary	89 (47.3%)	118 (55.7%)	207 (51.8%)
Higher secondary & above	27 (14.4%)	53 (25.0%)	80 (20.0%)
Employment status			
Homemaker	142 (75.5%)	109 (51.4%)	251 (62.8%)
Employed/self-employed	46 (24.5%)	103 (48.6%)	149 (37.2%)
Residence			
Urban	96 (51.1%)	102 (48.1%)	198 (49.5%)
Rural	92 (48.9%)	110 (51.9%)	202 (50.5%)

Maternal and Child Health Outcomes

Women who participated in empowerment initiatives demonstrated significantly better maternal healthcare utilization and child health outcomes compared to non-participants. Completion of recommended antenatal care visits, institutional delivery, postnatal care utilization, and full immunization coverage were consistently higher among empowered women.

Table 2: Maternal and child health indicators by empowerment program participation

Health indicator	Non-participants (%)	Participants (%)	Adjusted OR (95% CI)	p-value
≥4 ANC visits	96 (51.1%)	157 (74.1%)	2.30 (1.60–3.40)	<0.001
Institutional delivery	134 (71.3%)	186 (87.7%)	2.10 (1.30–3.20)	0.002
Postnatal care within 48 hrs	101 (53.7%)	158 (74.5%)	2.40 (1.60–3.60)	<0.001
Fully immunized child	119 (63.3%)	167 (78.8%)	1.90 (1.20–3.00)	0.004
Normal child nutritional status	104 (55.3%)	149 (70.3%)	1.80 (1.20–2.80)	0.006

Adjusted for age, education, socioeconomic status, and residence.

Thematic Analysis of Qualitative Findings

In-depth interviews were conducted with 30 women participating in empowerment initiatives. Thematic analysis revealed three overarching themes that elucidate the pathways through which empowerment initiatives influenced maternal and child health outcomes.

Theme 1: Enhanced Decision-Making Autonomy in Health Care

Women consistently reported improved autonomy in making decisions related to antenatal care, institutional delivery, child immunization, and nutrition. Participation in empowerment initiatives strengthened their confidence to engage in discussions with family members, particularly spouses and elders, regarding health-related matters.

Several participants described a shift from passive acceptance to active negotiation in household decision-making, especially concerning healthcare expenditure and service utilization.

"Earlier, I had to wait for my husband's permission to visit the hospital. Now, I decide when and where to go for check-ups."

This increased autonomy facilitated timely healthcare seeking and adherence to recommended maternal and child health practices.

Theme 2: Improved Confidence, Health Literacy, and Awareness

Empowerment initiatives provided structured health education sessions that enhanced women's understanding of pregnancy care, danger signs, immunization schedules, and child nutrition. Participants reported increased confidence in interacting with healthcare providers and asking questions during clinic visits.

Women expressed a greater sense of self-efficacy in managing their own health and that of their children, attributing this change to regular group meetings and exposure to health-related information.

"Now I know why injections are important for my child. I don't miss any dates."

Improved health literacy emerged as a critical mechanism linking empowerment initiatives to positive health outcomes.

Theme 3: Role of Peer Support and Collective Empowerment

Participation in self-help groups and community collectives fostered strong peer networks that reinforced positive health behaviors. Women highlighted the role of group discussions in sharing experiences, clarifying doubts, and motivating one another to utilize healthcare services.

Peer influence was particularly important in overcoming fear, misinformation, and sociocultural barriers related to institutional delivery and family planning.

"When other women in the group shared their hospital delivery experience, I felt confident to go."

Collective empowerment functioned as both emotional and informational support, strengthening sustained engagement with maternal and child health services.

DISCUSSION

The present study demonstrates a significant positive association between participation in community-based women's empowerment initiatives and improved maternal and child health outcomes. These findings are consistent with a substantial body of literature identifying women's empowerment as a critical social determinant of health, particularly in low- and middle-income countries.

Kabeer (1999), in her seminal conceptualization of empowerment, described empowerment as the process through which individuals acquire the ability to make strategic life choices in contexts where such ability was previously denied.[6] Applying this framework, the findings of the current study suggest that empowerment initiatives enhance women's access to resources (health information, peer support), strengthen agency (decision-making autonomy), and ultimately translate into improved health achievements, including higher antenatal care utilization and child immunization coverage.

Empirical evidence from India strongly supports these observations. Singh, Bloom, and Tsui (2013), using National Family Health Survey data, demonstrated that women who actively participated in household decision-making were significantly more likely to utilize antenatal care services and institutional delivery facilities.[7] Similarly, Pratley (2016), in a systematic review spanning multiple developing countries, reported consistent associations between women's empowerment indicators and improved maternal healthcare utilization and child health outcomes.[8] The magnitude and direction of associations observed in the present study closely mirror these findings, reinforcing the external validity of the results.

The qualitative component of this study provides important insight into the mechanisms through which empowerment influences health behaviours. Women reported increased confidence in engaging with healthcare providers and negotiating health-related decisions within households. These findings align with the work of Malhotra, Schuler, and Boender (2002), who emphasized that collective empowerment through group participation can strengthen women's voice, social capital, and capacity to challenge restrictive norms.[9] Peer networks emerging from self-help groups appear to function as catalysts for sustained health-seeking behaviour, particularly in contexts where individual autonomy may otherwise be constrained.

The consistency of positive effects across both urban and rural settings is noteworthy. While urban women generally benefit from better physical access to healthcare services, rural women often face compounded disadvantages due to geographic isolation and entrenched sociocultural norms. Despite these challenges, empowerment initiatives demonstrated measurable benefits in rural areas, echoing findings reported by UNICEF (2021), which highlighted the effectiveness of gender-responsive community interventions in bridging health inequities in underserved populations.

However, the study also underscores the persistence of structural barriers that limit the full realization of empowerment-related health gains. Upadhyay et al. (2014) cautioned that empowerment at the individual level may have limited impact in the absence of supportive health systems and broader socioeconomic development.[10] The qualitative narratives in the present study similarly indicate that financial constraints, transportation difficulties, and health system limitations continue to impede optimal utilization of maternal and child health services, particularly in rural communities.

Taken together, these findings support the growing consensus that women's empowerment should be positioned not merely as a gender equity goal but as a core public health strategy. The World Health Organization (2020) has emphasized that gender-transformative interventions are essential for achieving sustained improvements in maternal and child health.[11] Integrating women's empowerment initiatives with existing maternal and child health programs and aligning them with national and global policy frameworks may therefore yield substantial and sustainable public health benefits.[12]

CONCLUSION

Community-based women's empowerment initiatives are significantly associated with improved maternal and child health outcomes in Tamil Nadu. Integrating empowerment strategies into routine public health programs and expanding their reach in underserved communities may contribute substantially to reducing health inequities and achieving national and global development goals.

REFERENCES

1. Jejeebhoy SJ. Women's autonomy in rural India: Its dimensions, determinants, and the influence of context. Popul Dev Rev. 2000;26(2):263–85.
2. Ahmed S, Creanga AA, Gillespie DG, Tsui AO. Economic status, education and empowerment: Implications for maternal health service utilization in developing countries. PLoS One. 2010;5(6):e11190.
3. Carlson GJ, Kordas K, Murray-Kolb LE. Associations between women's autonomy and child nutritional status: A review of the literature. Matern Child Nutr. 2015;11(4):452–82.
4. Smith LC, Ramakrishnan U, Ndiaye A, Haddad L, Martorell R. The importance of women's status for child nutrition in developing countries. Res Rep Int Food Policy Res Inst. 2003;131:1–164.
5. Duflo E. Women empowerment and economic development. J Econ Lit. 2012;50(4):1051–79.

6. Kabeer N. Resources, agency, achievements: Reflections on the measurement of women's empowerment. Dev Change. 1999;30(3):435–64.
7. Singh K, Bloom S, Tsui A. Associations between women's empowerment and maternal health care utilization in India. PLoS One. 2013;8(8):e70153.
8. Pratley P. Associations between quantitative measures of women's empowerment and access to care and health status for mothers and their children: A systematic review. Soc Sci Med. 2016;169:119–31.
9. Malhotra A, Schuler SR, Boender C. Measuring women's empowerment as a variable in international development. Washington (DC): World Bank; 2002.
10. Upadhyay UD, Gipson JD, Withers M, et al. Women's empowerment and fertility: A review of the literature. Soc Sci Med. 2014;115:111–20.
11. World Health Organization. Women's empowerment and gender equality in health. Geneva: WHO; 2020.
12. UNICEF. Improving maternal and child health through gender-responsive programming. New York: UNICEF; 2021.