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Original Research Article

A COMMUNITY BASED OBSERVATIONAL STUDY ON THE IMPACT OF MATERNAL EDUCATION ON CHILD HEALTH SEEKING BEHAVIOUR

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ABSTRACT

Background: Maternal education is a well-recognised determinant of child health outcomes, influencing both preventive and curative care practices. Understanding this association can inform targeted interventions to improve child health indicators. **Objectives:** To evaluate the impact of maternal education on child health-seeking behaviour in a community-based setting.
Materials and Methods: A cross-sectional observational study was conducted among 300 mother–child pairs in rural and urban areas. Mothers were categorised into four groups based on their highest level of education: no formal education, primary (1–5 years), secondary (6–10 years), and higher secondary or above. Data on sociodemographic variables, preventive health practices (immunization, growth monitoring, exclusive breastfeeding), and curative health-seeking behaviours during child illness were collected using a pre-tested questionnaire. Statistical analysis included χ^2 tests for categorical variables and one-way ANOVA for continuous scores, with $p < 0.05$ considered significant.
Results: Preventive health practices improved significantly with increasing maternal education. Complete immunization coverage, regular growth monitoring, and exclusive breastfeeding rates were highest among mothers with higher secondary education or above (91.9%, 83.8%, and 85.1%, respectively) and lowest among those without formal education (55.4%, 41.1%, and 46.4%, respectively; $p < 0.001$). Curative care-seeking from qualified facilities was more frequent (94.6% vs. 58.9%), and delays in seeking care were less common (9.5% vs. 44.6%) among the most educated compared to the least educated group ($p < 0.001$). The mean overall health-seeking behaviour score increased from 5.8 ± 1.9 in the least educated to 9.2 ± 1.4 in the most educated group ($F = 48.32$, $p < 0.001$).
Conclusion: Higher maternal education is strongly associated with better child health-seeking behaviours. Interventions promoting female education could substantially enhance child health outcomes.
Keywords: Maternal education, child health, health-seeking behaviour, preventive care, curative care.

INTRODUCTION

Child health and survival are closely linked to maternal caregiving practices, particularly in the early years of life. Globally, maternal education is recognised as a critical determinant of child health outcomes, influencing preventive measures such as immunization, nutrition, and growth monitoring, as well as timely and appropriate care-seeking during illness.[1,2] Evidence consistently shows that educated mothers are more likely to recognise early signs of illness, seek timely medical care, and adhere to recommended health practices, thereby reducing childhood morbidity and mortality.[1-3]

In low- and middle-income countries, disparities in maternal education contribute substantially to inequities in child health. The World Health Organization (WHO) has identified maternal education as a key driver in achieving Sustainable Development Goal (SDG) 3, which aims to ensure

healthy lives and promote well-being for all ages.[1] Large-scale cross-country analyses indicate that maternal education is strongly associated with increased utilisation of child health services, including immunization and appropriate treatment for common illnesses.[3,6]

In the Indian context, maternal education has been linked to multidimensional improvements in child health outcomes, including better nutritional status, growth parameters, and healthcare utilisation.[4,5] However, the magnitude and nature of these associations vary across geographical and socio-cultural settings, reflecting the influence of contextual factors such as health system access, traditional beliefs, and socioeconomic status.[5,6]

The rural areas of Penamaluru Mandal, Vijayawada, Andhra Pradesh, present a unique context where limited healthcare infrastructure and diverse literacy levels coexist. Despite the availability of government health programmes, gaps persist in achieving optimal child health indicators, partly due to differences in maternal awareness and decision-making capacity. This study aims to examine the impact of maternal education on health-seeking behaviour for children under five years in this rural setting.

This study was undertaken to examine the impact of maternal education on health-seeking behaviour for children under five years in the rural setting of Penamaluru Mandal. By identifying patterns in preventive and curative care practices across education levels, the findings can inform targeted interventions to bridge the gap in child health outcomes.

MATERIALS AND METHODS

Study Design and Setting

This was a community-based cross-sectional observational study conducted in the rural areas of Penamaluru Mandal, Vijayawada, Andhra Pradesh, between September 2024 and February 2025. The study area comprises predominantly agrarian communities with limited access to tertiary healthcare facilities, making it an appropriate setting to assess the influence of maternal education on child health-seeking behaviours.

Study Population

The study population included mothers residing in the selected villages who had at least one child under five years of age.

Inclusion Criteria

Mothers who were permanent residents of the study area (≥6 months).

Mothers who provided informed consent for participation.

Exclusion Criteria

Mothers who were temporary residents or visitors.

Mothers with serious illness or communication difficulties at the time of data collection.

Sample Size and Sampling Technique

A total of 300 mother–child pairs were enrolled. The sample size was calculated assuming a 50% prevalence of appropriate health-seeking behaviour, a 5% absolute precision, and a 95% confidence level, with a 10% non-response adjustment. Villages were selected using simple random sampling, and households within each village were chosen through systematic sampling.

Data Collection Tools and Procedure

Data were collected using a pre-tested, semi-structured questionnaire administered by trained field investigators through face-to-face interviews. Information on sociodemographic characteristics, maternal education, preventive health practices (immunization, growth monitoring, breastfeeding), and curative care-seeking during child illness was obtained.

Operational Definitions

Maternal education was categorised as: no formal education, primary (1–5 years), secondary (6–10 years), and higher secondary or above. Appropriate health-seeking behaviour was defined using a composite score based on adherence to recommended preventive and curative practices.

Statistical Analysis

Data were entered into Microsoft Excel and analysed using SPSS version 26. Categorical variables were expressed as frequencies and percentages, and associations were tested using the χ^2 test. Continuous variables were expressed as mean ± standard deviation and compared using one-way ANOVA. A p-value < 0.05 was considered statistically significant.

RESULTS

A total of 300 mother–child pairs participated in the study. The mean age of participating mothers was 27.8 ± 5.2 years, with the majority (40.7%) in the 25–29-year age group. More than half of the participants (60.7%) resided in rural areas. Regarding education, 18.7% of mothers had no formal schooling, 24.7% had completed primary education, 32.0% had completed secondary education, and 24.7% had higher secondary or above (Table 1).

Table 1: Sociodemographic Profile of Study Participants (n = 300)

Variable	Frequency (n)	Percentage (%)
Maternal Age (years)		
18–24	84	28.0
25–29	122	40.7
≥30	94	31.3
Maternal Education		
No formal education	56	18.7

Primary (1–5 years)	74	24.7
Secondary (6–10 years)	96	32.0
Higher secondary & above	74	24.7
Residence		
Rural	182	60.7
Urban	118	39.3

Preventive health-seeking behaviours showed a clear positive association with maternal education. Mothers with higher secondary education or above demonstrated significantly greater rates of complete immunization coverage (91.9%), regular growth monitoring (83.8%), and exclusive breastfeeding for six months (85.1%) compared with those without formal education (55.4%, 41.1%, and 46.4%, respectively) ($p < 0.001$ for all; Table 2).

Table 2: Maternal Education and Preventive Health-Seeking Behaviour

Maternal Education Level	Complete Immunization Coverage (%)	Regular Growth Monitoring (%)	Exclusive Breastfeeding for 6 Months (%)
No formal education (n=56)	55.4	41.1	46.4
Primary (n=74)	67.6	55.4	59.5
Secondary (n=96)	82.3	71.9	74.0
Higher secondary & above (n=74)	91.9	83.8	85.1
χ^2 (p-value)	36.82 (<0.001)	29.74 (<0.001)	32.16 (<0.001)

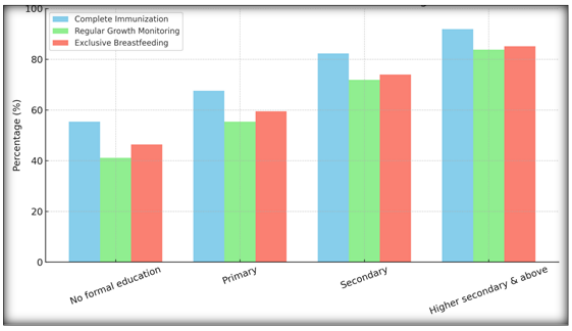

Figure 1: Maternal Education and Preventive Health-Seeking Behaviour

Similarly, curative health-seeking behaviours improved with increasing maternal education. The proportion of mothers seeking treatment from a qualified health facility during a child's illness was highest among those with higher secondary education or above (94.6%) and lowest among those with no formal education (58.9%). Delay of more than 24 hours in seeking care and reliance on home remedies were inversely related to maternal education ($p < 0.001$; Table 3).

Table 3: Maternal Education and Curative Health-Seeking Behaviour during Child Illness

Maternal Education Level	Sought Treatment from Qualified Health Facility (%)	Delay (>24 hrs) in Seeking Care (%)	Use of Home Remedies Before Medical Care (%)
No formal education (n=56)	58.9	44.6	62.5
Primary (n=74)	70.3	32.4	49.9
Secondary (n=96)	85.4	18.8	32.3
Higher secondary & above (n=74)	94.6	9.5	21.6
χ^2 (p-value)	41.25 (<0.001)	38.61 (<0.001)	35.88 (<0.001)

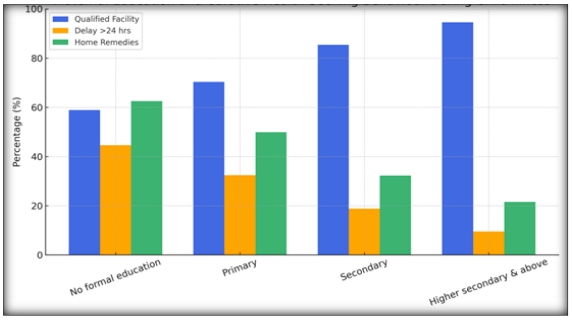

Figure 2: Maternal Education and Curative Health-Seeking Behaviour during Child Illness

The overall appropriate health-seeking behaviour score, assessed through a composite index, increased progressively with maternal education. The mean score was 5.8 ± 1.9 among mothers without formal education, 7.1 ± 2.1 among those with primary education, 8.4 ± 1.7 for secondary education, and 9.2 ± 1.4 for higher secondary or above. One-way ANOVA revealed a statistically significant difference between groups ($F = 48.32$, $p < 0.001$; Table 4).

Table 4: Association between Maternal Education and Overall Appropriate Health-Seeking Behaviour Score

Maternal Education Level	Mean Score (±SD)	ANOVA F-value	*p*-value
No formal education (n = 56)	5.8 ± 1.9		
Primary (n = 74)	7.1 ± 2.1		

Secondary (n = 96)	8.4 ± 1.7		
Higher secondary & above (n=74)	9.2 ± 1.4	48.32	<0.001

DISCUSSION

This community-based study in rural Penamaluru Mandal, Vijayawada, demonstrated a strong and consistent association between maternal education and child health-seeking behaviours. Mothers with higher secondary education or above exhibited significantly better preventive practices such as complete immunization, regular growth monitoring, and exclusive breastfeeding as well as more appropriate curative care compared to mothers with no formal education. The graded improvement in overall health-seeking behaviour scores across educational levels reflects patterns observed in similar community-based research.[7]

Our findings resonate with evidence from Indonesia, where analyses of national demographic and health survey data revealed that higher maternal education was linked to increased utilisation of healthcare services for children under five.[8] In Nigeria, maternal access to health insurance and adequate healthcare utilisation was found to significantly reduce under-five mortality risk, underlining the importance of both education and access to resources [9]. These results also align with observations from rural Telangana, where women with higher education levels demonstrated better health-seeking behaviours for themselves and their children.[10]

Cultural and geographical factors may also influence these behaviours. Studies from Nigeria have highlighted rural–urban disparities in maternal immunization knowledge and childhood health-seeking practices, with rural mothers often disadvantaged due to lower education and reduced healthcare access.[11] Additionally, in the digital age, educated mothers may increasingly seek credible online health information, enhancing their ability to make timely and informed decisions regarding child healthcare.[12]

A notable strength of this study is its community-based design, allowing assessment of real-world behaviours in a representative rural population. However, potential recall bias in reporting health practices and the cross-sectional nature of the study limit causal inference.

CONCLUSION

This community-based study in rural Penamaluru Mandal, Vijayawada, demonstrates a strong positive association between maternal education and child health-seeking behaviour. Higher educational attainment among mothers was linked to improved preventive practices, including complete immunization, regular growth monitoring, and exclusive breastfeeding, as well as better curative care, with reduced delays and greater utilisation of qualified healthcare services. The overall health-seeking behaviour score showed a clear upward trend with increasing education levels. These findings highlight the pivotal role of female education in enhancing child health outcomes. Strengthening educational opportunities for girls and integrating health education into community programmes may yield sustainable improvements in child well-being.

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