

Maternal Education and It's Influence on Health Awareness. A Study Among Women in Devikulam Thaluk, Idukki District, Kerala, India

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Abstract- Extensive and in-depth research has pointed out numerous evidences that maternal education to be a very strong and consistent predictor in reduced maternal and child mortality rate in developing countries. A deeper understanding calls for investigation how maternal schooling affects in developing women's health awareness and health seeking behavior. This study examines how the maternal education level influences the awareness level of health-related matters of mother and child. The study attempts to analyze the awareness level of women about pregnancy and child birth, immunization and management of childhood malnutrition and anemia and various aspects of health-related matters of mother and child. It is very evident from this study that maternal education level strongly connected to the health information level among mothers and thus improves better health care utilization, improved level of utilization of antenatal services, management of maternal health during pregnancy and better health results of their children.

Key words- Maternal education, Health awareness, anemia, malnutrition, Antenatal services, child immunization.

INTRODUCTION

Health is a multidimensional concept that is strongly affected by not only biological factors but also many social factors. Age, gender, occupation, family income, educational background, Geographical location, etc. are some of the significant social determinants of good health of an individual. Research shows that social determinants can be more important than health care or lifestyle. Factors linked to socioeconomic status, such as poverty and poor education are hugely important in predicting health outcomes. These factors become more crucial in the development and well-being of children. Mothers' social situation plays a prominent role in the right health outcomes for a child. Mother has an essential role in a child, family, and health life,

where her education acts as a valuable factor. General education is important because it improves not only productivity and output but also many non-market social benefits, especially for women and the marginalized. Maternal education has often been suggested to be the single most important factor explaining differentials in child health outcomes. The present study mainly aims to analyze the educational status of the mother and its correlation with the general health status of the mother and child. According to the World Bank Report 2019, approximately 34 children per 1000 live births do not survive till the age of five years due to various reasons such as neonatal infections, low birth weight, pneumonia, and diarrhea among others. The poor public health system in India which significantly affects the poor and marginalized section of the society further weakens the maternal education on child health. India has been home to more than one-third of the world's malnourished children. According to NFHS, in 2021 97 million children in India were underweight, which is the highest in the world. It is very evident that in Indian society the social conditions of women including literacy rate, income occupation general health conditions, etc. are much lower than their opposite gender. Studies conducted in different settings in the country show a strong linkage between maternal education and mother and children's health. Under this scenario, the role of maternal education and awareness in developing a child's positive health outcomes is a predominant factor.

LITERATURE REVIEW

Research shows that health inequities start from infancy and early childhood. Accordingly, of all the factors related to child development, social determinants of health such as social class, social deprivation, marginalization, stress, and childhood

development. Unemployment, conditions of work employment, social support, addiction, food, transportation, urbanization, and world migration greatly influence fetal and childhood growth and play a very important role in the development of the child. Maternal education remains an important determinant of a child's health outcome. According to the World Bank report Rate of malnutrition of India's children is almost five times more than China and twice that of sub-Saharan African countries. Nearly half of all India's children -approximately 60 million – are underweight, and about 45% are stunted. 75% are anemic, and 57% are vitamin- A deficient. (World Bank Report 2019)¹. Maternal education linkages are strongest for medical care, immunization, and iron supplementation for pregnant mothers. (Vikram k et al 2020)². A mother's education is widely poised to affect positively her health and nutrition in developing economies. Mondel and Rayhan (2014)³ In their study conducted in Bangladesh found that a mother's years of schooling are greatly affected by her parental family education, consequently, a mother's education is crucially important for a child's health-seeking behavior and growth. In addition to individual characteristics, program, and system factors influence the utilization of maternal care in rural areas. Program factors, particularly educational activities promoting the benefits of maternal care services in rural areas are important in increasing the use of maternal care services. (S.V Subramanyam et.al,2014)⁴. A study conducted by Sohini Paul et al⁵ (2022) in rural India suggests that following global evidence maternal education remains an important determinant of child health outcomes in India too. However, the association between maternal education and child health outcomes weakens in the presence of a poor healthcare system. Health system improvement first benefits the already privileged in the Indian context. Meghen Sheperd Banigen ⁶ et al (2019) argues maternal income increases immediate investment in children for food, child care, and health care. Family income plays a crucial role in accessing quality health care, as in India still, the public health system is in a transitional stage. Research suggests that higher maternal income might improve children's health and development outcomes through increased household investments in children. Attansio and Lachane⁷, (2002), (Becker et al⁸(2002) The relationship between parental education and child health has been studied for

decades but mainly in low or middle-income countries. It is important to distinguish the overall level of welfare in the countries of consideration since the link between education and child health is likely to differ across countries with different levels of welfare and national institutions (Bhalotra and Rawlings⁹ 2013, Hjorth-Trolle et al¹⁰, 2020; Semyonov et al¹¹, 2013)

Lower-income children are more likely than wealthier children to live in homes with inadequate physical environments and to have mothers who are more likely to be stressed, depressed, harsh, and unresponsive. Additionally, low-income children have lower PPVT scores, more mother-reported aggressive, withdrawn, and anxious behaviour problems, and also more interviewer-reported problems with behaviour, than more affluent children. Berger et al¹²,2009, Currie and Goodman¹³,2004. According to Lakshmana Sami T¹⁴(2021), women with at least formal education are better placed to seek child immunization, which is further facilitated by the mother's knowledge and awareness of immunization programs. Socioeconomic variables like status, father's education, birth, order, urban residence, and religion significantly influence child immunization status, but community and birth intervals are not important for child immunization. Significantly more boys receive complete immunization than girls, showing some form of neglect of female children. John G. Kleland and Jerome K. Van Gin¹⁵(1988) in their study point out that on average each one-year increment in mothers' education corresponds with a 7-9% decline in under-five-year-old children's mortality. Barthélémy Kuate Defo¹⁶, (1997) points out in his study that the burden of illness rests disproportionately on economically disadvantaged women with low social status. The study states that the long-term effects of social disadvantage are apparent in the excesses of morbidity among women who are not employed at the time of their children's birth. A study done by Sudha Jaiswal et al (2022)¹⁷ in Uttar Pradesh, India among rural pregnant women found that illiteracy and lack of adequate awareness about proper antenatal care was a prevalent trend in rural households. Socio-demographic variables such as category, education, occupation, and socio-economic status of pregnant women were found to be significantly associated with ANC awareness. Diane Coffey et al¹⁸, 2022 point out the general social status of mothers and how it affects a child's health outcome. Children of Lower-ranking

mothers are less likely to survive child's health and have worse health outcomes, reflected in higher neonatal mortality and shorter heights, compared to children of higher-ranking mothers within the same household.

In short, maternal education and general awareness play a significant role in the positive health outcome of mother and child. At the same time, social determinants like household income, and maternal social status are some of the important variables that directly influence mother's health and child development. In a developing country like India, where the majority has a distant dream of good quality health care, poor maternal awareness further aggravates the situation in an already poor public health system.

SIGNIFICANCE OF THE STUDY

Kerala, a state on the southwestern coast of India is the best performer in the health sector in the country. But Idukki, one of the state's districts, is facing an acute shortage of public health infrastructure and a scarcity of transportation facilities. The literacy rate of women is much lower than the state average (74%). Most of the households survive on daily wage work. The poor social situation affects the community's most vulnerable group: The women and children. The majority of women in the thaluk are unaware of various schemes provided by the state for improving the condition of mothers and children due to a lack of adequate education and general awareness.

OBJECTIVE OF THE STUDY

To analyse how maternal educational status influences health-related awareness among mothers of Devikulam Thaluk.

MATERIALS AND METHOD

STUDY DESIGN.

The study was carried out among the rural women population of Devikulam Thaluk of Idukki district. Unlike other states in Kerala, Idukki district has less developed infrastructure facilities and connectivity. Even though it is the largest district in the state in terms of area, it is the second least populated district as most of the land is inhabitable because of its high terrain nature majority of the population in the Devikulam Thaluk belongs to the BPL category

(Below poverty line), Around 95% of the population engaged in casual labors or plantation works or doing daily wage works. The literacy rate (81%) is well below than state average (92%).

TARGET AUDIENCE AND DATA COLLECTION.

The survey was conducted among pregnant women and mothers of preschool children aged above 18 years. 332 mothers (including pregnant women) of preschool children were selected randomly from various panchayats of the Thaluk. The samples were selected randomly from across all panchayats in the Thaluk. The survey was conducted with the help of Anganwadi workers and ASHA workers. A detailed Performa was given to obtain information about the educational qualification and awareness level in various health-related behaviours, and information of mothers of children in preschool years. The survey was conducted from the second week of June 2024 to the first week of July 2024.

Criteria for selection of participants in the survey.

The participated individual was selected randomly from the population of the study area randomly who met the following criteria.

- Women who are expecting a child and mothers of preschool children (children's age between 0 –6 years).
- All participants should be within the BPL category. (below Poverty Line).

The researcher decided to include only women of BPL category in this survey because health utilization pattern is strongly connected to the financial background of the family. Even if the mother is well educated and having adequate awareness on health-related matters, financial hurdles of the family often create challenges in availing quality health care her and her children. The health awareness and proper utilization antenatal services among expecting mothers is found to be the foundation of maternal and child health. More over children up to six years are found to be more prone to suffer from malnutrition, stunted growth and nutritional anemia and more vulnerable to infectious diseases. So, the survey was keen on these specific parameters while selecting the women who among the survey was conducted.

For the study, the researcher used- the data gathered from the Household and Women's Questionnaire on respondents' educational background and various

aspects of general awareness of women and their children’s health-seeking behaviour.

The Performa included questions to assess maternal awareness of ANC services including pregnancy registration, routine USG during pregnancy, Anemia and its complications in pregnant mothers, malnutrition in young children, the importance of institutional delivery, and awareness about the optimum body weight in young children. importance of timely immunization in children, good mental health during pregnancy, and practicing personal hygiene in young children.

RESULTS

The aim of the study is to analyse how mother’s education connected to their level of information’s on health-related knowledge of mother and child. The survey done among a group of women with different educational background. The group included women who are totally illiterate to those who holds graduation or higher qualification. The sample categorized the group in to four groups based on their educational background and collected responses from all group regarding health-related information’s. The responses from each group analysed separately and it is pretty clear that the awareness level is getting improved from group 1 to

group (Least educated) to group 4 (highest education background among the participants) step.

Out of 332 women selected, 12 individuals are illiterate. 132 women have gone up to 4th grade of schooling. 173 women have completed 12th grade, and only 15 nos are holding graduation or above qualification. Based on the educational attainment of the selected women for the study, the sample has categorized into four groups.

GROUP-1 - ILLITERATES.

GROUP-2 - 4TH GRADE.

GROUP-3 - 12TH GRADE.

GROUP-4 - GRADUATION OR ABOVE.

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Table-1 AWARENESS ON PREGNANCY REGISTRATION.

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	6	50%
Up to 4 th Std	132	98	74%
High school level (12 th grade)	173	153	88%
Graduation or above	15	15	100%
Total sample size	332		

Table -1 shows the awareness level among women surveyed about the importance of registration of pregnancy with the local health center. In group 1, 6 out of 12 (50 %) did not have any information about the registration of pregnancy. Some of them have heard about the procedure, but not aware about how important it is for the mother and child for getting proper health care services from the health facility.

In group 2, 98 women out of 132 (74%) were aware about the need of pregnancy registration. The level of awareness was 153 out of 173 (88%) in group 3 and 15 out of 15 (100%) women who have graduation or above were well aware about the importance of registration of their pregnancy with the local health facility.

TABLE-2- AWARENESS ON NUTRITIONAL ANEMIA DURING PREGNANCY AND THE IMPORTANCE OF BALANCED NUTRITION.

Maternal Education level	Level of awareness		
	sample	Nos	Percentage
Illiterate	12	3	24%

Up to 4 th Std	132	69	52%
High school level	173	145	83%
Graduation or above	15	14	93%
Total sample size	332		

From Table -2, it is evident that in group 1, only 3 out of 12 women (24% of participants who are classified as illiterates) have an awareness of the need for a balanced diet and complications of anemia during the pregnancy period. In group 2, the

number of aware participants is 69 out of 132 (52%), in group 3, it is 145 people out of 173 (83%) and in group 4, 14 out of 15 participants have information on the importance of balanced nutrition and the complications of anemia during pregnancy. (93%).

TABLE-3 IMPORTANCE OF ROUTINE ULTRASOUND SCANNING DURING PREGNENCY

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	0	0%
Up to 4 th Std	132	28	21%
High school level	173	116	67%
Graduation or above	15	13	91%
Total sample size	332		

Table 3 shows the awareness among surveyed women about the importance of routine USG during pregnancy. Group 1 no participants show any kind of awareness on the importance of mandatory USG procedure during the first trimester of pregnancy., In

group 2, the number is 28 out of 132 (21%), in group 3, the number is 116 out of 173 (67%) and in group 4, 13 out of 15 (91%) participants are aware of the importance of routine USG procedure in the first trimester.

Table-4. AWARENESS ABOUT INSTITUTIONAL DELIVERY

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	10	85%
Up to 4 th Std	132	128	96%
High school level	173	170	99%
Graduation or above	15	15	100%
Total sample size	332		

Table 4 shows the awareness among women about the safety of hospital-assisted delivery and how it is important to avoid complications during childbirth. In group 1 the number of participants who are aware is 10 out of 12 (85%) In group 2, the number is 128 out of 132, is 96%, In group 3, the number is 170 out

of 173 participants (99%) and in group 4 all participants in the survey are fully aware about risk less hospital assisted childbirth (100%). This result indicates that almost every woman has some amount of awareness about the importance of institutional delivery irrespective of their educational attainment.

Table-5. PSYCHOLOGICAL WELL BEING DURING PREHNAVANCY PERIOD

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	0	0%
Up to 4 th Std	132	15	11%
High school level	173	53	29%
Graduation or above	15	9	64%
Total sample size	332		

Table 5 shows how women who participated in the study responded to how important the psychological well-being of carrying and nursing mothers is and

how it influences the child. In group 1, nobody has any kind of information about the importance of the positive mental health status of pregnant and nursing

mothers (zero percentage). In group 2, only 15 out of 132 surveyed women are aware of it (11%), in group 3, the number is 53 out of 173 (29%) and in

group 4 the number of participants who are aware of the importance of positive mental health during pregnancy and nursing women is 9 out of 1; 64%.

Table-6. AWARENESS ABOUT MALNUTRITION IN YOUNG CHILDREN AND NUTRITIONAL ANEMIA

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	3	25%
Up to 4 th Std	132	53	41%
High school level	173	137	81%
Graduation or above	15	15	100%
Total sample size	332		

Table 6 indicates awareness of malnutrition in children and subsequent anemia among the women who participated in the survey. The results shows that only 25% participants in group 1(3 people out of 12) have the awareness on malnutrition in

children and childhood anemia. In group 2, 53 out of 132 are aware (41%). in group 3, the number is 137 out of 173 (81%) and 100% of participants in the survey of group 4 (15 out of 15) are informed of childhood malnutrition and anemia.

Table-7. AWARENESS ABOUT UNDER WEIGHT AMONG YOUNG CHILDREN

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	3	25%
Up to 4 th Std	132	53	41%
High school level	173	131	81%
Graduation or above	15	15	100%
Total sample size	332		

Table 7 shows awareness about children’s underweight and related health issues. Only 25% of group 1 women have awareness about underweight challenges in young children. (3 out of 12 participants who are grouped as illiterates). In group

2the number is 53 out of 132 (41%), In group 3 the number is 131 out of 173 (81%), and 100% of group 4 participants have full awareness on the health challenges and related issues in underweight children.

Table-8. AWARENESS ABOUT THE IMPORTANCE OF TIMELY VACCINATION IN CHILDREN

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	7	62%
Up to 4 th Std	132	104	78%
High school level	173	152	87%
Graduation or above	15	15	100%
Total sample size	332		

Table -8 shows the awareness among surveyed women regarding the level of awareness on the importance of timely vaccination in children. The results show that in group 1, 7 out of 12 participants (62%) are aware about the importance of timely

vaccination in children. In group 2, 78%, of participants (104 out of 132), in group 3 87% of participants (152 out of 173), and in group 4 100 % of participated women are aware of the importance of timely vaccination in children.

Table-9. AWARENESS ABOUT PRACTICING PERSONAL HYGENE PRACTICES AMONG YOUNG CHILDREN

Maternal Education level	Sample Size	Level of Awareness	
		Nos	Percentage
Illiterate	12	2	18%

Up to 4 th Std	132	32	26%
High school level	173	77	46%
Graduation or above	15	11	76%
Total sample size	332		

Table 9 shows the awareness level among surveyed women regarding personal hygiene practices in children. Among group-1 participants only 18% has the awareness on proper personal hygiene practices in children (3 out of 12). Group-2 has 26%, (32 out of 132), group 3 has 46% (77 out of 173), and in group 4, 76% of participants (11 out of 15) have awareness about hygiene practices in children. Personal hygiene in children mainly focuses on sanitation habits, washing their hands before food, awareness of drinking water contamination, dental and body hygiene, etc.

Source- Author’s field study analysis.

DISCUSSION

As predicted, maternal education level is generally more important for mother and children’s health when the outcome is directly under her or her family’s control. This is especially true for obtaining health care such as antenatal and postnatal care or having the child fully immunized as well as for the optimum growth in children according the age. The results in this study demonstrate that educated mother has adequate awareness of various aspects antenatal care, which starts from registration of her pregnancy with the local health facility. They use their education to improve their health. It is very much evident that how the level of awareness varies with the level of education among the participants. The results clearly indicate that, the awareness level among women is very low for the illiterate group. Those participants who have higher level of education have the highest awareness level in all health-related information regarding mother and child health.

The fact that more than 100 women out of 100,000 is still dying in India due to childbirth-related complications (MMR Rate, 2020), every year reinforces the importance of ensuring that all pregnant women receive adequate antenatal care during pregnancy and that deliveries take place under the supervision of trained medical personnel in a hygienic environment. Antenatal care during pregnancy provides an opportunity for a variety of preventive interventions during pregnancy. It also allows women who face a high-risk pregnancy to be identified and monitored during pregnancy to ensure

safe delivery. ANC Includes educating women about balanced nutrition, the complications of anemia during pregnancy, safe delivery, and postpartum care. Educated mothers are more likely to recognize a problem, seek medical care, and report a problem. There is a consistently strong and positive relationship between health-related knowledge and maternal education, as seen in table 1 to 9. It is very evident that illiterate women are least informed about antenatal services and the awareness level is improving according to their educational attainment. The survey found that many women have not heard about government schemes such as Jnani Suraksha Yojana (JSW), the scheme for the betterment of mothers and children. The educated women group has better knowledge about high-risk pregnancy including maternal anemia during pregnancy and the importance of taking folic acid. It is evident that the women with comparatively more education are more informed with the importance of timely immunization of their child, malnutrition in children and anemia and better personal hygiene practices in children.

At the same time, it is to be noted that women's and child health-related behavior can be affected by multidimensional factors. Most of the women in the surveyed group know the importance of institutional delivery irrespective of their education. (Ref table-4). At the same time. even educated women among the participants are not aware of the importance of positive mental health conditions for pregnant and nursing mothers. Many women participants responded that living in a combined family, economic constraints, and husband’s alcoholism are some of the main reasons for their psychological struggle. The study also noted that even the higher awareness level did not help many women as they are facing from financial hurdles and severe transportation issues to access quality health care. For example, some have responded that the main reason for missing immunization schedule for their child is mainly due to transportation challenges, even if the mothers have good awareness.

CONCLUSION

To summarize the findings of the study, it is pretty clear that the maternal education level plays a

significant role in the general awareness among mothers about the health-seeking aspects of them and their children. A well-aware mother can manage their family's health-related matters more effectively. At the same time apart from mothers' education maternal and child health can be affected by multidimensional factors including socio-economic situations, transportation issues, etc. These social and geographical challenges further weaken a less educated and less informed mother.

RECOMMENDATIONS

Availing quality health care depends on multidimensional factors such as socio-economic background, education. Geographical access, connectivity and many more. All these factors need to be addressed simultaneously in developing countries like India where Universal Health Coverage (UHC), is still at the nascent stage. Education and health awareness will not alone help in a society where quality health care is unaffordable. At the same time accessing quality health care is still possible for rich and urban residents even if they are not educated or well informed. So, more research may be needed to address these aspects especially in developing nations about the multifactorial challenges in health care sector.

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