

MATERNAL KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING CHILDHOOD DEVELOPMENT IN UNDER 5 CHILDREN IN MIRPUR, AJK

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ABSTRACT

Objectives: This study was carried out to determine the level of maternal education and to relate it with the different practices of child care and development.

Study design and setting:

This cross-sectional study of 180 mothers from Mirpur, AJK was carried out from September 2023 to February 2024 in Mohiuddin Teaching Hospital. After obtaining informed consent, a self-explanatory, valid, and reliable questionnaire was filled out in the presence of an investigator.

Methodology: The responses were analyzed using the student's t-test, one-way ANOVA and linear regression analysis by using SPSS 21. The p-value of <0.05 was considered significant with a confidence interval of 95%.

Results: There was a statistically significant positive correlation between maternal education and family planning ($p = 0.022^*$), baby's breastfeeding ($p = 0.029^*$), water introduction practices ($p=0.017^*$), diaper use ($p=0.001^*$), bathing water temperature ($p = 0.002^*$), playing with the children ($p=0.04^*$) and involvement in child' education ($p=0.000^{**}$).

Conclusion: Maternal education significantly influences maternal and child health practices, adherence to feeding guidelines hygiene standards and better awareness of healthcare practices. Additionally, maternal education positively impacts parental involvement in children's education, potentially enhancing academic outcomes and fostering child development.

Keywords: Attitude, Breastfeeding, Child development, Knowledge, Nutrition, Sanitation,

INTRODUCTION

The key factor affecting the development and behavior of children is the mother's knowledge of childhood development. Developmental milestones include the stages of development that occur within a predictable age range, but are not limited to, walking, talking, and feeding themselves.¹ Adverse parenting techniques, poor mental health of mothers and financial instability are recognized risk factors for behavioral issues in children².

There is a recommendation from the World Health Organization (WHO) to exclusively breastfeed for at least six months and continue with it till two years of age, and delay the supplemental feeding after the infant's sixth month of life but there are very low rates of its compliance in general³ despite the facts that breastfeeding is a low-cost and readily available, beneficial to the baby's health in every aspect and promotes the nursing mother's health in the short and long term⁴.

The most economical and efficient way to prevent the spread of infection in children is to wash hands frequently⁵ as using unclean hands when cooking or eating, increases the risk of pollutants or germs entering the body and leading to a variety of ailments⁶.

Considerable emphasis is being paid to the connections between children's academic accomplishment, physical activity, fitness, and cognitive function⁷. Play improves children's cognitive, physical, social, and emotional health. Additionally, it is a great way for parents to interact with their kids on many levels⁸. Encouragement, praise, good communication, and cooperative play are a few examples of positive parenting practices. Conversely, harsh and vocal criticism are examples of negative parenting behaviors⁹.

The present study was carried out to determine the level of maternal education and to relate it with the different practices of child care and development.

METHODOLOGY

This cross-sectional study was carried out from September 2023 to February 2024 in Mohi-ud-Din Teaching Hospital (MOTH) Mirpur, AJK. "Cochran's Formula" i.e., $n_0 = z^2 \times p \times (1-p)/e^2$ was used for the estimation of sample size which was 384 but due to limited resources and unavailability of the large size population, we did extensive literature-guided non-probability convenient sampling of 180 mothers of 16-50 years age group. Approval from the ethical review committee of Mohiuddin Islamic Medical College was taken (0022). After obtaining informed consent a self-explanatory, valid, and reliable questionnaire was filled in the presence of a

trained investigator. The responses were analyzed using SPSS 21 with 95% confidence interval and a p-value of < 0.05 was considered statistically significant. The comparison between the two groups was carried out by using student's t-test and between more than two groups by one one-way ANOVA. Linear regression analysis was used to find the correlation between two variables.

RESULTS

Table I: Comparison of mothers according to educational status for KAP

Practices	Groups	Mean±SD	p-value
Children	Two or less	14.04±2.09	0.022*
	More than two	13.17±2.90	
First bath	At 24 hours	14.07±2.20	0.043*
	Within 24 hours	13.20±2.80	
First food	Breast feeding	13.99±2.61	0.029*
	Other than breastfeeding	13.30±2.48	
Start of the Soft food	6 months	14.03±2.22	0.019*
	Other than 6 months	12.4±3.11	
Sanitation	Diapers	14.06±2.35	0.000***
	Nappies	12.09±2.41	
Sick child	hospital/dispensary	13.71±2.68	0.039*
	Household remedies	13.40±2.27	

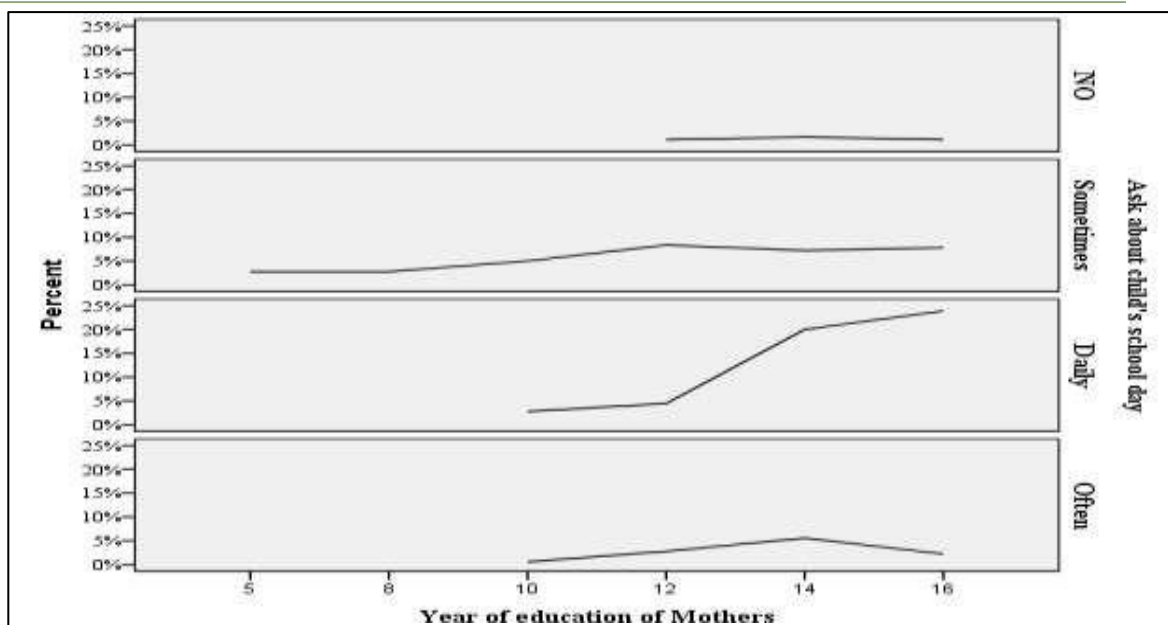
Table 1 depicts that mothers with higher education levels tend to have fewer children ($p=0.022^*$), bath their babies at 24 hours after birth ($p=0.043^*$), prefer breastfeed as the first food ($p=0.029^*$), start soft food at 6 months of age ($p=0.019^*$), use diapers (0.000^{***}) and take their sick child to a hospital/dispensary (0.039^*) compared to less educated mothers.

Table II: Comparison of educational status of the mothers and baby care

		Sum of Squares	Df	Mean Square	F	Sig.
Start giving water to the baby	Between Groups	30.427	2	15.213	4.191	.017*
	Within Groups	642.523	177	3.630		
	Total	672.950	179			
Temperature of water used for baby bath	Between Groups	6.950	2	3.475	6.628	.002*
	Within Groups	92.800	177	.524		
	Total	99.750	179			

There is significant impact of level of education of mothers and age of the baby to start water $F(2, 177) = 4.19$, $p=0.017^*$ and type of water according to temperature used to give bath to the babies $F(2, 177) = 3.47$, $p = 0.002^*$.

Figure I: Comparison of mothers according to educational status and involvement in child's education. (Linear regression analysis $p= 0.000$)



In Figure I there is noticeable trend, interest in academics of the child increases as the educational level of the mother raises. Specifically, there is a 20 to 25% increase in mothers' interest in academics as their educational level progresses from intermediate to post-graduation.

Figure II: Comparison of mothers according to educational status and playing with the children.
(Linear regression analysis $p=0.04$)

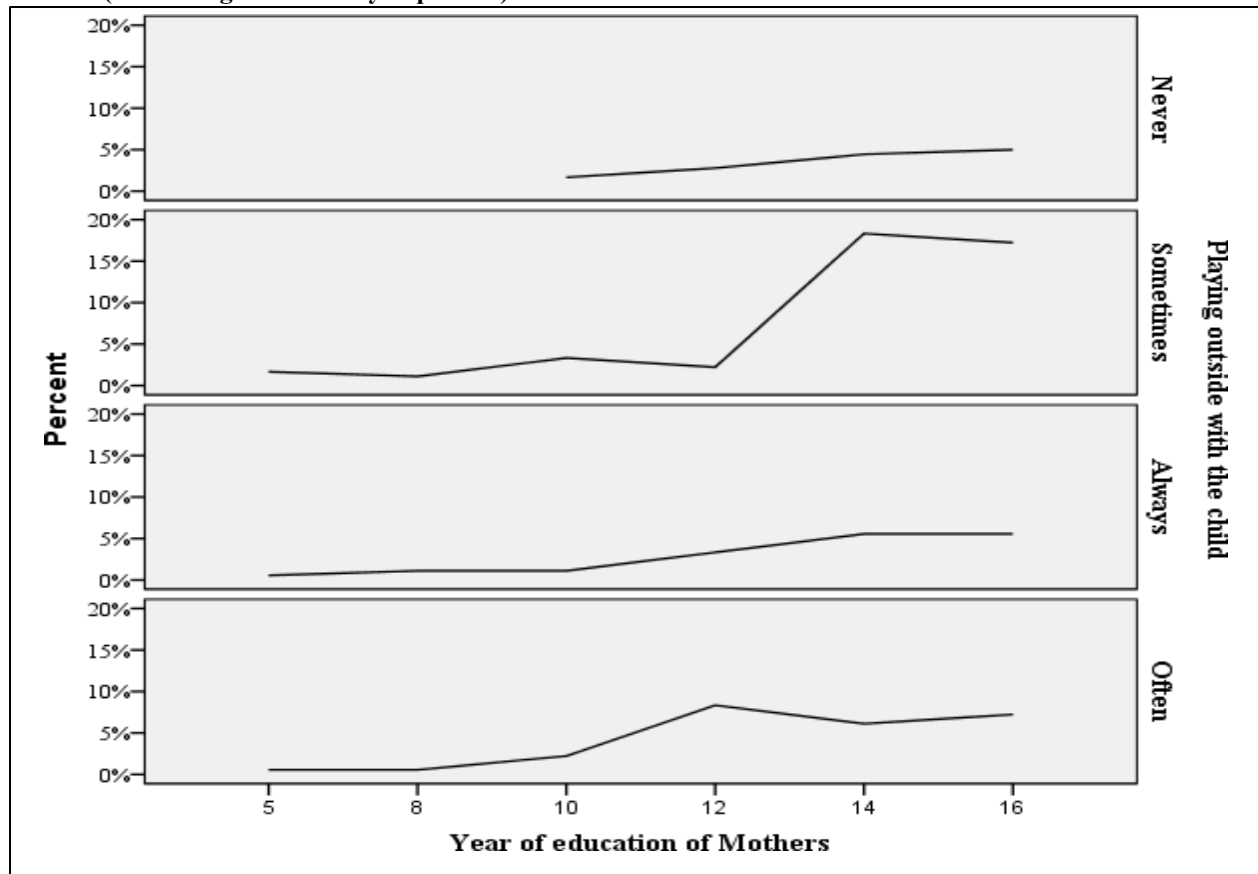


Figure II depicts that although a majority of mothers are generally not inclined towards playing outside with their children. Interestingly, among educated mothers, those with a graduate degree show the highest interest in playing with their children outdoors.

DISCUSSION

The findings of our study suggest that maternal education plays a significant role in influencing various maternal and child health practices. Mothers with higher education tend to adopt healthier practices for themselves and their children than less educated mothers. Similar results were found in a study conducted in Ethiopia which demonstrates that education impacts the health, influenced by attitudes, understanding, and the availability of healthcare services¹⁰.

On assessing the feeding practices of mothers, it was found that educated mothers had better adherence to infant feeding guidelines according to the recommendations of WHO¹¹ and knew that breastfeeding provides numerous health benefits to both mothers and infants. Similar results were found in a study conducted in Europe where educated mothers had better breastfeeding practices as compared to uneducated mothers¹². A study conducted in India suggests that infant and young child feeding practices can be improved by increasing maternal literacy and their adherence to infant feeding guidelines¹³.

Our data also showed that educated mothers are better aware of newborn care practices similar to findings in a survey conducted in Gujrat; Pakistan where educated mothers had better newborn care practices¹⁴.

On observing the hygienic practices, we found that Diaper use is associated with better hygiene practices, which can contribute to the overall health and well-being of infants. A study conducted in the USA suggests that the use of an emollient-containing diaper with a pH-buffered wipe creates conditions favorable to optimum diapered skin health¹⁵.

Particularly noteworthy is that educated mothers sought professional medical care and had better awareness of healthcare practices and access to healthcare services in comparison to uneducated mothers. A systematic review and meta-analysis conducted in Ethiopia suggest that maternal educational status is a major determinant of the continuum of maternal healthcare service utilization¹⁶. Similarly, a systemic review of sub-Saharan Africa suggests that women's literacy is recommended to improve the utilization of Antenatal care and skilled birth delivery

services in sub-Saharan African countries¹⁷, highlighting the importance of educational interventions and women's empowerment in improving maternal and child health outcomes.

Furthermore, the study sheds light on the result that mothers with different levels of education introduced water to their babies at different ages. Educated mothers followed guidelines recommending the delayed introduction of water to infants, while less educated mothers introduced water earlier. A similar study conducted in Gadarif city; eastern Sudan suggests that Mothers with poor knowledge were less likely to have good practices of water introduction to babies¹⁸.

We also found that educated mothers were more aware of the recommended temperature (warm water) for bathing infants, while less educated mothers used water at different temperatures. A study conducted in Nigeria showed similar results where women with secondary/higher education had better practices of baby baths and used warm water¹⁹.

This study found that higher maternal education levels are associated with increased interest and involvement in their child's academic activities. Mothers with more advanced education possess a greater awareness of the importance of education and are more actively engaged in supporting their children's learning. Understanding this relationship can have implications for educational interventions and policies. It highlights the importance of supporting maternal education to enhance parental involvement in children's education, which can positively impact children's academic outcomes and overall achievements. Similar results were found in a study conducted in Uganda which suggests that higher levels of education, particularly attainment of a graduate degree, correlate positively with maternal engagement in outdoor play with children²⁰.

CONCLUSION

The level of maternal education plays a crucial role in shaping maternal and child health practices. Educated mothers tend to exhibit healthier behaviors, including following feeding guidelines and maintaining hygiene standards. They also display greater awareness of healthcare practices and have better access to services compared to less educated mothers. Moreover, maternal education positively influences parental engagement in children's education, which can lead to improved academic performance and overall child development.

Limitations

The small sample size in our study may limit the generalizability of the results. Future research should consider using a larger sample size to enhance the robustness and applicability of the findings.

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