

MATERNAL LITERACY AND MALNUTRITION IN CHILDREN: A COMPARATIVE STUDY

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ABSTRACT:

Objective: Nutritional status is an important aspect of child's health profile and affects child's development and growth. This study aimed at exploring relationship between maternal literacy and malnutrition in children under-five years old. **Methods:** Two groups were made comprising of mothers, according to the nutritional status of their under-five children presenting in free clinic in Ali Raza Abad Lahore with URTL.

Results: Significant difference was found in literacy level in two groups; with 38% illiteracy amongst mothers with malnourished children as compared to 14% amongst women with children not suffering from malnutrition and p value at 0.0062. More mothers of children suffering from malnutrition were found illiterate as compared to mother of well-nourished children. **Conclusion:** As illiteracy affected children nutrition it is recommended that illiterate women may be targeted for health education on short term basis and education be made mandatory for long term solution to this problem.

Keywords: malnutrition, maternal literacy, under-five children

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INTRODUCTION

While malnutrition remains the biggest hurdle in improving children health globally especially third world countries and affects normal development, hence increasing morbidity and mortality in this vulnerable group. Nearly half of all deaths in children under five are attributable to under nutrition, translating into the loss of about 3 million young lives a year.¹ In 2017, in under 5 year children globally. 50.5 million were wasted and 150.8 million were stunted. While stunting is less than minus 2 SD for height for age and wasting is less than minus 2 SD for weight for height.² Infections e.g diarrhea

in the setting of malnutrition lead to more complications, deaths and delay recovery.³

In KPK, district Nowshera, Ali et al, found that 12.5% children were stunted, 15% were underweight, and 7% were wasted.⁴ Another study from KPK, Afridi accounted that 14% children are underweight, 8% were underweight and stunted in Swat.⁵ In a study from Quetta, Baluchistan it was reported that one out of two (48%) children were stunted and 10% were wasted.⁶ In another study Ansari highlighted that 22% children were stunted, 10% were wasted, and 24% were underweight in urban areas of Pakistan.⁷ Similar finding was also presented by the Batool that the prevalence of stunting was 46% and underweight was 25% and 18% was under weight.⁸ In Sindh province, the situation of children in term of stunting, wasting, and underweight is alarming according to different studies. Nisar reported that 61% of children were stunted, 54% were underweight, and 47% were wasted in rural Sindh.⁹ Similar findings were observed by Shah, who found that 26% children were

wasted, 55% were stunted, and 15% were both wasted and stunted in hospitalized children.¹⁰

Asim et al in 2018 conducted a meta-analysis and concluded that Early marriages, large family size, high fertility rates with a lack of birth spacing, low income, and the lack of breastfeeding and exclusive breastfeeding were found to be major determinants of child malnutrition.¹¹ Ickes et al observed that low maternal literacy was associated with poor infant and child feeding practices and malnutrition in children.¹² Khattak et al also found that paternal and maternal education levels were significantly associated with children nutritional status.¹³ Children malnutrition is a key subject if dealt with properly can improve health parameters in children. This study aimed at exploring relationship between maternal literacy and malnutrition in children under-five years to identify high risk strata so that strategies could be focused to bring behavior changes to improve children malnutrition.

METHODS

Hundred mothers were interviewed presenting in family health clinic in Ali Raza Abad, Lahore with Upper respiratory tract infections of recent origins (less than 3-day duration of illness), were divided into two groups based on nutrition status of their child into well-nourished and malnourish group if the child weight for age of height for age was less than 3rd percentile as per WHO growth monitoring chart. Questionaries were filled after taking consent. Literacy was assessed if woman could read consent form and write that she gives consent for the study in Urdu.

RESULTS

Group A consisted of mothers whose children had malnutrition according to the criteria specified above. Mean age of the women in Group A was 34+/- 6 years of age. Mean family income was 29000 +/- 11000rs per month. They all lived in the urban areas. 21(42%) lived on rent. 31(62%) were living in unitary families while 19(38%) lived in combined families. Mean number of children were 3.3+/- 1.2. 33(66%) women were housewives while 7(14%) worked in schools and 4(8%) worked in factories, 6(12%) were doing in home-based business. 31(62%) mothers could read the consent form and had given written consent showing literacy while 19(38%) could not read consent and given written consent

Group B consisted of mothers whose children were not suffering from malnutrition according to the criteria specified above. Mean age of the women of Group B was 35+/- 7 years of age. Mean family income was 35500 +/- 9000rs per month. They all lived in the urban areas. 17 (34%) lived on rent. 22(44%) were living in unitary

families while 28(56%) lived in combined families. Mean number of children were 3+/- 1.5. 36(72%) women were housewives while 6 (12%) % worked in schools and 2(4%) worked in factories, 6(3%) were doing in home-based business. 43(87.5%) women read the consent form and wrote clearly that they give consent showing that they were literate while 7 (14%) women could not read the form.

Table:1 Sociodemographic characteristics

Socio demographic features		Group A n=50	Group B n=50
Mean age		36+/-6years	37+/-7years
Mean income		29000+/- 11000 rs	35500+/- 9000 rs
Mean number of children		3.3+/-1.2	3+/-1.5
Resident of area	urban	50(100%)	50(100%)
	rural	0(0%)	0(0%)
	house own	29(58%)	33(66%)
	rented	21(42%)	17(34%)
Family type	unitary	31(62%)	22(44%)
	combine	19(38%)	28(56%)
Nature of work	House wife	33(66%)	36(72%)
	School teachers	7(14%)	6(12%)
	Factory worker	4(8%)	2(4%)
	House based business	6(12%)	6(12%)

Chi square test of applied and difference between literacy amongst mother with children suffering from malnutrition as compared to the ones not suffering was found significant with pat 0.0062. Table 2

Table 2: Maternal illitracy and malunnutrition in children n=100

	Mother with malnourished children	Mother with well-nourished children	P value
Illiteracy Present	19(38%)	6(12%)	.0062
Absent	31(62%)	44(88%)	

DISCUSSION

Nutritional status is an important aspect of children health profile and directly and indirectly affects child’s development and growth. If not, adequate it complicates many diseases and affects resistance to diseases and vulnerability to succumb to greater morbidity and mortality. Asim et al in his meta-analysis identified many social factors associated with malnutrition in children.¹¹This study shows strong association between maternal illiteracy and malnutrition as significantly larger proportion of illiteracy was observed in mother of

malnourished children. The observation is interesting in the fact that despite the advent of nonconventional health educational tools in the form of media and Tv where minimal literacy is required to gain health education passively, malnutrition showed association with maternal literacy which clearly shows that despite health education through Tv and media broadcasts, education does have a role in prevention malnutrition in the children. Ickes et al had similar finding where maternal literacy showed strong association with poor infant and child feeding practices and malnutrition.¹² Results of this study are also in consensus with finding of Khattak et al who also observed strong association between maternal literacy and child's nutritional status.¹³

CONCLUSION

While stake holders are committed to betterment of health especially of vulnerable strata, need of the hour is to take wholesome actions in order to improve child health of the community. Literate mothers have shown to have well nourished children compared to illiterate mothers. Thus a more robust health education strategy for the illiterate mothers through social and health workers is recommended in the short term and a more wholesome approach that is mandatory education is recommended on long term basis.

ETHICAL APPROVAL

The study was approved from Institutional Review Board of Postgraduate Medical Institute/Ameer ud Din Medical College/Lahore General Hospital, Lahore, Pakistan, vide reference No. 00-40-21, dated March 01, 2021.

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AUTHORS' CONTRIBUTION:

SRHZ: Study design, Manuscript writing

JJ: Data analysis, drafting

TM: Literature search, data interpretation, drafting

NR, AF: Data Analysis, Data Collection