

Original Research Article

A study to assess knowledge of mothers' of under-five children regarding PEM in field practice areas of a tertiary health care teaching hospital from Hyderabad

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ABSTRACT

Background: Despite of starting nutritional programs early into the life of country, India has not been able to control the status of malnutrition. Mothers being in close contact and primary care takers most of the times, directly influence health of the child.

Methods: This community based descriptive study was conducted with systematic random sampling and a unique tool developed to assess maternal knowledge on PEM having 30 point system was used to grade knowledge into 3 categories of low knowledge, intermediate knowledge and high knowledge of PEM.

Results: There was significant association observed in maternal educational status, educational status of family and with increase in maternal age.

Conclusions: With strengthening of policies for development of maternal education and income, and delaying average age at marriage and subsequently age at pregnancy, knowledge of mothers can be increased resulting in reducing prevalence of malnutrition in community.

Keywords: Knowledge, Knowledge scores, Malnutrition, PEM, Socio economic status, Undernutrition maternal knowledge

INTRODUCTION

India is the country, which despite of starting nutritional supplementation program in the earliest days of 20th century, have failed to address the problem effectively. According to NFHS-5 data released, about one third of the children are underweight and equal number of them are stunted, due to chronic deficiency of food.¹

Mothers being the primary care takers for these pre-school children, health status of mothers influence the nutrition status to a great extent. Education of mothers is especially has been found to be playing a pivotal role in improving health conditions of children. With increase in the educational status of women, from previous surveys.¹

Many studies done previously, have pointed out the significant role of women's education in infant and child nutrition, morbidities and mortality.²⁻⁴ in relation to the high prevalence of undernutrition in under 5 children in the surrounding and other southern states of India, It was necessitated to do the basic research of estimation maternal knowledge of PEM and its associations in the state of Telangana.⁵

METHODS

The current field based descriptive study was carried out in field practice area of Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad from July 2019-September 2019. All the mothers with children in under 5

age were line listed with the help of anganwadi workers, falling in the defined areas of rural and urban health training centers of the area. With population proportional sampling, it was decided that 40 percent of sampling will come from urban slums and remaining 60 percent sampling will be done from rural field practice area. So after calculating sample size of 455, systematic random sampling was carried out, till the desired sample size was achieved.

A special tool was developed to assess the knowledge of mothers about protein energy malnutrition, which had 30 questions, apart from some personal identification data. Scores were given to each question (1 score for each correct question). Based on the scores obtained, the study participants were divided into low knowledge (<15),

intermediate knowledge (15-23) and High knowledge (24-30).

RESULTS

Of the all 455 study participants, it was observed that majority of the participants included were in the age group of 26-30, followed by 20-25 years of age. Most of the study participants were either illiterate or they were primary educated. When socio demographic status was compared with, most of the participants were in class II, according to modified BG Prasad classification. Also, when the study participants were assessed with knowledge scale, the study participants were having low or intermediate knowledge. Very few, (4) participants had high knowledge.

Table 1: Distribution of study participants.

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Parameter		Urban		Rural	
		Number	Percentage	Number	Percentage
Age (years)	<20	5	2.75	27	9.89011
	21-25	54	29.67	96	35.16484
	26-30	97	53.30	120	43.95604
	>30	26	14.29	30	10.98901
Educational qualification	Illiterate	36	19.78	34	12.45
	Primary	43	23.63	36	13.19
	Secondary	36	19.78	93	34.07
	High school	40	21.98	76	27.84
	Inter	18	9.89	11	4.03
	Graduation and above	9	4.95	23	8.42
Socio economic status according to modified B.G. Prasad scale	Lower class	31	17.03	75	27.47
	Lower middle class	96	52.75	168	61.54
	Upper middle	55	30.22	30	10.99
Distributions according to knowledge scale	Low	113	62.09	189	69.23
	intermediate	66	36.26	83	30.40
	High	3	1.65	1	0.37

Table 2: distribution of study participants based on age groups and knowledge scores, in urban and rural areas.

Age group	Urban			Rural		
	Low	Intermediate	High	Low	Intermediate	High
<20	0	3	2	18	9	0
21-25	35	18	1	67	29	0
26-30	56	41	0	101	19	0
>30	22	4	0	16	13	1
$\chi^2=6.5791$; p=0.037; df=2			$\chi^2=13.5077$; p=0.003658; df=2			

It was observed that, (Table 2) when study participants were there was statistical significance observed in age and knowledge scores in both urban and rural area. Similar association was observed when educational qualification (Table 3) was found to be statistically significant with knowledge scores.

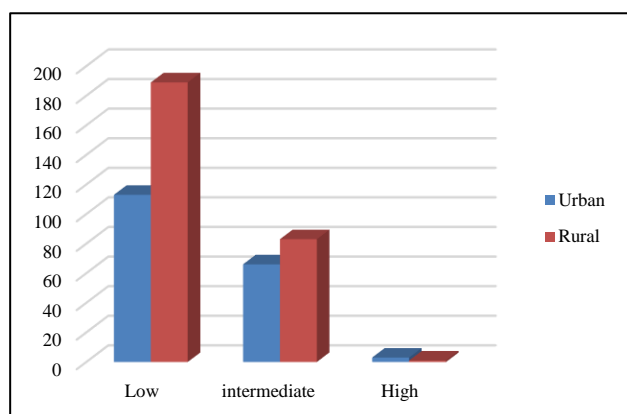
There was (Table 4) significant association, to suggest that as socio economic status increases. There was increase in the knowledge scores, to suggest that socio economic status can prove to be a preventive measure for reducing prevalence of malnutrition (PEM) in under 5 children.

Table 3: Distribution of study participants based on educational qualification and knowledge scores, in urban and rural areas.

Educational qualification of study participants	Urban			Rural		
	Low	Intermediate	High	Low	Intermediate	High
Illiterate	33	3	0	22	12	0
Primary	26	17	0	27	9	0
Secondary	14	21	1	78	15	0
High School	21	19	0	48	28	0
Inter	8	10	0	3	7	1
Graduation and above	2	5	2	11	12	0
	$\chi^2=26.77$; $p=0.000022$; $df=4$			$\chi^2=23.87$; $p=0.000085$; $df=4$		

Table 4: Distribution of study participants based on socioeconomic classification and knowledge scores, in urban and rural areas (no participants were observed in other classes of modified B.G. Prasad classification).

Socio economic classification	Urban resettlement area			Rural		
	Low	Intermediate	High	Low	Intermediate	High
Lower class	25	6	0	73	2	0
Lower middle class	47	48	1	101	67	0
Upper middle	41	12	2	15	14	1
	$\chi^2=15.19$; $p=0.000502$; $df=2$			$\chi^2=39.56$; $p<0.00001$; $df=2$		

**Figure 1: Distribution of participants based on knowledge score in urban and rural areas.**

DISCUSSION

We observed that increase in age of mother was also associated significantly with the knowledge of mothers about PEM. This is in consistent with studies done world over and in India as well.⁶⁻⁸

When socio economic classification was compared with knowledge of mothers about protein energy malnutrition, it was observed that there is significant association, which goes in aggregation to the age old theory that, socio economic status or family income has its association with PEM/undernutrition however there exists some studies which contradicts the theory.^{4,6,8} Our findings of the study are consistent with older theory itself, which means, to elevate the nutritional status of any community, there is

large need to include poverty eradication programs through multi sectoral co-ordination is essential.

Similarly education of the mother and other family members has also been co related with nutritional status of children from the family.⁶ Findings from our study are also consistent with the same observations, however it is evident through historical trends as well that there has been some though insignificant fall in the prevalence of malnutrition, especially undernutrition in Indian population as there has been consistent increase in the literacy rate. Though a study by Gupta et al, contradicts the findings and they found out that there was no significant difference in the prevalence of under nutrition and educational status of mothers.² This might have resulted due to inclusion of joint families and also belonged to one particular religion, as contrast to the present study where majority of the study participants in urban and rural areas belonged to nuclear families and was homogeneous for religion.

CONCLUSION

We observed that, if the age at delivery of child is increased, educational status of mother is improved, along with increase in socio economic status of mother, the knowledge of mothers in relation to PEM can be improved and prevalence of undernutrition and or malnutrition can be reduced. Though serious efforts are being made in this regards, multi sectoral co-ordination with special local needs based modular approach can be used, for improving nutritional status in the population.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. National Family Health Survey- 5, 2019-20. State fact sheet Telangana. Available from: http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_TG.pdf. Accessed on 23 December 2020.
2. Gupta MC, Mehrotra M, Arora S, Saran M. Relation of childhood malnutrition to parental education and mothers' nutrition related KAP. *Indian J Pediatr*. 1991;58(2):269-74.
3. Chit TM, Kyi H, Thwin A. Mothers' beliefs and attitudes towards child weight, child feeding and related practices in Myanmar. *Nutr Health*. 2003;17(3):231-54.
4. Saito K, Korzenik JR, Jekel JF, Bhattacharji S. A case-control study of maternal knowledge of malnutrition and health-care-seeking attitudes in rural South India. *Yale J Biol Med*. 1997;70(2):149-60.
5. NFHS-5 State Factsheet 22 states/UTs from phase-I. Available from: http://rchiips.org/NFHS/NFHS-5_FCTS/NFHS-5%20State%20Factsheet%20Compendium_Phase-I.pdf. Accessed on 23 December 2020.
6. World Bank. 1990. World Development Report 1990: Poverty. New York: Oxford University Press; 1990:260.
7. Ayaya S, Esamai F, Rotich J, Olwambula A. Socio-economic factors predisposing under five-year-old children to Severe protein energy malnutrition at the Moi teaching and referral hospital, Eldoret, Kenya. *East Afr Med J*. 2004;81(8):415-21.
8. King FS, Burgess A, Quinn VJ, Osei AK. Nutrition for Developing Countries. 3rd Edition. Oxford, New York: Oxford University Press; 2015:400.

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