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Original Research Article

A study on maternal factors associated with knowledge, attitude and practices regarding feeding practices among mothers attending NRC

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ABSTRACT

Background: Child under nutrition is the leading cause in more than one third of infant and child death globally especially in developing countries. Various social and environmental factors affect child nutrition and result in under nutrition. Maternal knowledge, their attitude, and practices all can have an effect in changing the child's nutritional pattern. It is thus essential that mothers have proper knowledge on dietary practices in prevention of malnutrition, which, in turn, can help them to have good attitude toward the dietary practices so that they can change their behaviour and harmful practices.
Methods: Information obtained from the mothers of children admitted to nutrition rehabilitation centre (NRC) during the period from January 2020 to June 2021 using the questionnaire with direct interview method. Used a predesigned questionnaire on respective mothers.
Results: 42.8% of mothers had an overall good knowledge. 91.96% of mothers had a positive attitude and good practices towards feeding practices of children admitted to NRC.
Conclusions: Education occupation and socio-economic class does not influence the knowledge attitude and practices of mothers regarding feeding practices whereas number of ANC visits has a significant effect.

Keywords: Knowledge, Attitude practices, Maternal factors, Feeding practices

INTRODUCTION

Childhood malnutrition is a major public health concerns in low and middle-income countries. Various social and environmental factors affect child nutrition and result in under nutrition. One of those factors which has a crucial role in the nutrition and development of a child is the Knowledge, attitude and practices of mothers towards the feeding practices.[1] India alone accounts for more than 61 million stunted children (low height for age), 47 million underweight children (low weight for age) and 25 million wasted children (weight for height).[2]

Estimates from the National Family and Health Survey (2015–16) shows that in Karnataka 35.4 % children less than 5 years are stunted (height-for-age) and 19.5% children are wasted (weight for height). 8.4% of children are severely wasted. 32.9% children are underweight.[3]

Malnutrition especially under nutrition affects various domain in children including physical health, psychological development, social, education and occupational domains of the child. This also influences child's future productivity. Maternal knowledge, their attitude, and practices all can have an effect in changing the child's nutritional pattern. It is thus essential that mothers have proper knowledge on dietary practices in

prevention of malnutrition, which, in turn, can help them to have good attitude toward the dietary practices so that they can change their behaviour and harmful practices.[4] One among the main predisposing factors for malnutrition among under five years old children can be limited knowledge of the mothers/caregivers on proper feeding practices such as exclusive breastfeeding, complimentary feeding, appropriate food type, and mix, and also limited time for mothers available for their care during pregnancy, care or feeding for infants, and children. The mother's nutrition knowledge applied in daily life greatly affects the condition of the family nutrition especially children under 5 years.[5] Nutrition rehabilitation (NR) is the method of managing malnourished children by encouraging the mothers to feed them back to health with a suitable diet of locally available foods.[6,7]

METHODS

The study was conducted in the nutrition rehabilitation centre (NRC) in Mysore. Children and mother/care taker will stay for a maximum of 14 days. In addition to providing nutritious food to children, awareness is being created to mothers' /care takers on preparation of nutritious food.

This was a cross sectional study of research work which was conducted for 18 months from January 2020 to June 2021.

Study population

Children with severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) admitted in NRC Mysore district.

The information obtained from the mothers of children admitted to NRC using the questionnaire with direct interview method. Used a pre-designed questionnaire on respective mothers.

Inclusion criteria

Children admitted to the NRC, mothers of children admitted at NRC and children of mothers who has given consent.

Exclusion criteria

Children, whose parents are not willing to participate in the study. Left against medical advice (LAMA) before 24 hours of admission before study could be done and children less than 4 months of age.

Sample size

Sample size was calculated as 112. Here based on the prevalence of wasting (weight for height) in Mysuru district which is 17.3% (p) according to District family health survey IV. Data collection was started after getting ethical clearance from the Institutional Ethical Committee. The participants and their parents who verbally assented and consented respectively for the study were approached by the researcher.

Statistical methods

SPSS (Statistical Package for Social Sciences) Software (trial version) was used for data analysis. Descriptive statistics like frequency and proportions were used to assess the knowledge attitude and practices of mothers. The association of knowledge attitude and practices with age of the mother, education, socio economic status of the family, birth order of the child, and type of family were assessed using Chi-square test.

RESULTS

Total number of children taken up for the study was 112. Table 1 shows the distribution of children admitted to NRC according to their socio-demographic profile. Maximum number of children belong to the age group of 6 months to 2 years. 58.9% was male children and 41.1% were female children. 94% children belonged to nuclear family. According to Modified B G Prasad Classification 2021, majority of the children belongs to a middle-class family (52.7%) followed by lower middle class (34.8%). 89.3% of family had a social security scheme whereas 10.7 % of the families lacks any of the social security schemes (Table 1).

Out of the 112, 42% mothers knew till what age they should breast feed their baby. They gave the correct answer that is minimum 2 years which is less than mothers had incorrect knowledge (58%).

81.3% of mothers knew when to start the complimentary feeding for the child which is more than mothers with incorrect knowledge (18.7%). 49.1% of mothers knew that their children have nutrition problem and 54.5% of mothers know that malnutrition can cause low scholastic performance. Only 40.2% of mothers answered correctly for the question which food item is rich in protein. They have given name of at least one protein rich food item which is lesser than the number of mothers had wrong knowledge (59.8%) (Table 2).

Knowledge of mothers was scored giving 1 for correct answer and 0 for the wrong answers. Total knowledge score ≥4 (80%) was taken as good knowledge and score <4 80%) taken as a poor knowledge, using Bloom's cut-off point.

90.2% of mothers had good attitude towards treatment of malnutrition. 89.3% of mothers are interested in knowing more about the child feeding practices. 86.6% of mothers had a good attitude towards making positive changes in the feeding practices. 73.2% of mothers had a positive attitude towards follow up of children.

49.1% of mothers gave exclusive breastfeeding for 6 months. 92.9% of mothers didn't give any pre lacteal feeds to the child which is a good practice. 43.8% of mothers gave top milk in correct dilution. 70.5% of mothers initiated complimentary feeding on correct timing that is at 6 months. Only 38.4% of mothers checked their child's weight voluntarily (Table 2).

Out of total 112 children 14 never checked their weight prior to the admission. Among children whoever had a history of checking their weight (not necessarily voluntary), majority (43.8%) of them checked their weight in Anganwadi centre followed by paediatric OPD (33.1%) where they go for minor ailments. 13.7% of children checked their weight during their routine immunization (Figure 1).

Table 1: Distribution of the study participants according to socio-demographic profile.

S. no.	Variables	Categories	Number (N)	Percentage (%)
1.	Age (years)	0-6	12	10.7
		7-12	30	26.8
		13-24	39	34.8
		25-36	17	15.2
		37-48	9	8
		48-60	5	4.5
2.	Sex	Male	66	58.9
		Female	46	41.1
3.	Religion	Hindu	88	78.6
		Muslim	24	21.4
		Others	0	0
4.	Type of family	Nuclear	94	83.9
		Joint	12	10.7
		Three generation	6	5.4
5.	Monthly income	<5000	2	1.8
		5000-10000	71	63.4
		10001-15000	29	25.9
		15001-20000	7	6.3
		≥20001	3	2.7
6.	SE classification	I upper class	2	1.8
		II upper middle class	11	9.8
		III middle class	59	52.7
		IV lower middle class	39	34.8
		V lower class	1	0.9
7.	Social security schemes	Yes	100	89.3
		No	12	10.7

Table 2: Knowledge, attitude and practice of mothers regarding feeding practices

S. no.	Knowledge, attitude and practices	Response frequency (%)	
	Knowledge	**Correct (%)**	**Incorrect (%)**
1.	Till what age you should breastfeed your baby?	47 (42)	65 (58.0)
2.	When you should start complimentary feeding?	91 (81.3)	21 (18.7)
3.	Did you know your child has malnutrition?	55 (49.1)	57 (50.9)
4.	Malnutrition can cause low scholastic performance?	61 (54.5)	51 (45.5)
5.	Which food items are rich in protein?	45 (40.2)	67 (59.8)
6.	Is it important to treat malnutrition?	101 (90.2)	11 (9.8)
	Attitude		
7.	Are you interested in knowing more about nutrition of children?	100 (89.3)	12 (10.7)
8.	Do you want to make any changes in your children's nutrition?	97 (86.6)	15 (13.4)
9.	Do you want to complete your child's follow up?	82 (73.2)	30 (26.8)
	Practices		
10.	Duration of exclusive breast feeding?	(6 months) 55 (49.1)	(<6 months) 57 (50.9)
11.	Any pre lacteal feeds given?	No	Yes

Continued.

S. no.	Knowledge, attitude and practices	Response frequency (%)	
		104 (92.9)	8 (7.1)
12.	Bottle feeding given?	No 59 (52.7)	Yes 53 (47.3)
13.	When did u start complimentary feeding?	6 months 79 (70.5)	<6 months 33 (29.5)
14.	Did you check your child's weight voluntarily anytime?	Yes 43 (38.4)	No 69 (61.6)

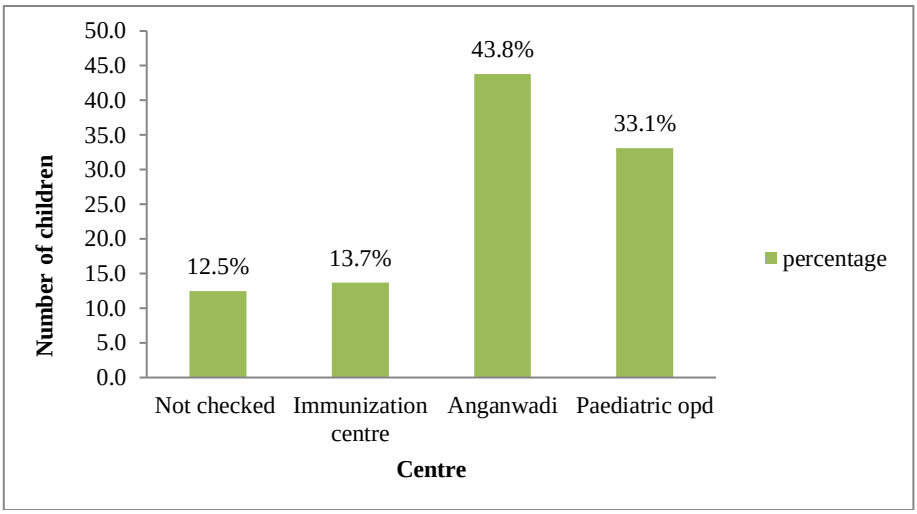

Figure 1: Distribution of children according to their practice of checking the child's weight.

Table 3: Association of maternal factors with knowledge, attitude and practices on feeding practices among mothers.

Maternal characteristic	Category	Knowledge		Attitude		Practices	
		Good N (%)	Poor N (%)	Good N (%)	Poor N (%)	Good N (%)	Poor N (%)
Age of mother (years)	<21	13 (33.33)	26	36	3	36	3
	21-30	34 (47.89)	37	66	5	66	5
	>30	1 (50)	1	1	1	1	1
		2.867	0.090*	15.372	0.004*	15.372	0.004*
Education of mother	Illiterate	3 (50)	3	5	1	6	0
	Primary	14 (45)	17	27	4	28	3
	Secondary	19 (38)	31	46	4	38	12
	PUC	10 (50)	10	20	0	14	6
	Degree	2 (40)	3	5	0	3	2
		0.099	0.753*	13.020	0.111*	6.417	0.170*
Occupation of mother	House wife	43 (42.57)	58	95	6	81	8
	Employee	5 (45.45)	6	8	3	20	3
		0.112	0.738*	8.366	0.015*	0.560	0.401*
Monthly income	<5000	1 (20)	4	5	0	3	2
	5000-10000	26 (38.24)	42	61	7	56	12
	10001-20000	19 (54.28)	17	34	2	28	8
	>20000	2 (66.67)	1	3	0	2	1
		2.176	0.140*	4.111	0.662*	1.872	0.599*
SE class	1	2 (100)	0	1	1	2	0
	2	6 (54.54)	5	11	0	6	5
	3	26 (44.07)	33	57	2	50	9
	4	14 (35.89)	25	33	6	30	9
				1	0	1	0
		11.731	0.016*	16.995	0.030*	6.124	0.190*

Continued.

Maternal characteristic	Category	Knowledge		Attitude		Practices	
		Good N (%)	Poor N (%)	Good N (%)	Poor N (%)	Good N (%)	Poor N (%)
Religion	Hindu	38 (43.18)	50	80	8	70	18
	Muslim	10 (41.67)	14	23	1	19	5
		0.602	0.438*	1.147	0.564*	0.002	0.968*
Place of delivery	Hospital	26 (100)	82	4	0	1	3
	Home	0	4	103	5	40	68
				0.194	0.660*	0.241	0.534*
Number of ANC visits	<3	4 (10.8)	33 (89.2)	33	4	19	18
	≥3	22 (29.3)	53 (70.7)	74	1	22	53
		4.769	0.029*	5.218	0.040*	5.176	0.023*

*Statistically significant

Knowledge of mothers was scored giving 1 for correct answer and 0 for the wrong answers. Total knowledge score ≥4 (80%) was taken as good knowledge and score <4 80%) taken as a poor knowledge, using Bloom's cut-off point.

Knowledge of mothers was compared across the characteristic of mothers are shown in Table 3. There is a statistically significant association between socio economic class (p=0.016) and the number of ANC visits (p=0.029) with the knowledge of the mothers whereas no association was found between age of the mother, education, religion, or place of delivery with knowledge of mothers.

Association of maternal factors with attitude of mothers. Each item had two options yes or no. yes was given a score 1 and no was given a score zero. Total score was calculated then. Score more than 2 is considered as good attitude and less than 2 is considered as poor attitude.

Age of mother (p=0.004), occupation of mother (p=0.015) socioeconomic classification (p=0.030) and number of antenatal visits (0.040) had a statistically significant association with attitude.

Age of mother (p=0.004), and number of ANC visits (0.023) had a statistically significant association with the practices, no other factors show significant association with the practices of the mother (Table 3).

DISCUSSION

In our study 91 (81.3%) mothers knew about the proper age of initiation of complementary feeding. In a similar study done 57.2% considered 4-6 months appropriate to start complementary feeding. In our study only 42% of participants knew till what age they should practice EBF. In another study they gave a higher percentage of (98.2%) participants who knew till what age they should practice EBF.[8]

Education occupation and socio-economic class does not influence the knowledge attitude and practices of mothers regarding feeding practices whereas number of ANC visits has a significant effect. This indicates the importance of efficient ANC care in implementing good feeding practices of the child. In a study done by Kaur K et al. Age and education of mother was positively and significantly correlated with the knowledge of feeding practices.[9]

In a cross-sectional study done by Assefa et al. on knowledge attitude practices of mothers on infant and young child feeding practices the results obtained was age of mothers, educational status of the mother, place of delivery, educational status of the fathers was statistically associated with mothers' knowledge.[10]

In our study mothers had a positive attitude towards treating malnutrition, majority of mothers were interested in knowing more about the child nutrition, and 86.6% of mothers wanted to make positive changes in their feeding practices and 73.2% of mothers had a positive attitude towards the follow up of the child.

In a study done on mothers of children admitted to NRC in Tirupati on Assessment of Knowledge, Attitude and Practice of Mothers with Severe Acute Malnutrition Children Regarding Child Feeding, results were suggestive of the mothers have favourable attitude towards the statements breast milk protect the child from illness and colostrum is nutritious to the baby. Negative attitude was observed towards the statement regarding exclusive breast feeding for 6months, child digestion of heavy foods.[11]

There was no statistical association between mother's age, religion, occupation and family income with the duration of exclusive breastfeeding (EBF) in a similar study done in Ethiopia.[12]

Limitations

The study was done in a single NRC with a smaller sample size. There was no follow up to check that whether there was any improvement in KAP of mothers

after availing the services in NRC which include the education regarding feeding practices of children.

CONCLUSION

Mothers knowledge on feeding practices of the child is influenced by various socio-economic factors. Knowledge, attitude and practices of mothers of children attending NRC is of paramount importance in finding the root cause of occurrence of malnutrition in our society. It is not always necessary that all the factors which was considered conventionally as the reason for lack of knowledge including education of mothers to turn out as the exact reason for the lack of good knowledge and attitude and best practices in case of nutrition and care of children.

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