

Associating factors with Knowledge attitude and practices of mothers of fewer than five children regarding prevention of Protein Energy Malnutrition

Mr. Harish Kumar Sharma^{1§}, Dr. Chellarani Vijaykumar², Mr. Vikas Choudhary³

^{§1}PHD Scholar, MVGU, Jaipur (Rajasthan) India

²Supervisor, MVGU, Jaipur (Rajasthan) India

³Principal, Jeevan shree Nursing College, Jaipur

Abstract— Protein Energy Malnutrition is a public health problem in fewer than five children and mothers are mainly responsible for that. So this study was conducted to find out associating factors with knowledge Attitude and Practices of mothers of fewer than five children regarding Protein Energy Malnutrition and its prevention. This study was conducted on 300 mothers of fewer than five children residing at Dhand Amer, Jaipur (Rajasthan) area. Data were collected by using structured interview questionnaire. Collected data was analyzed by using descriptive and inferential statistics. The results revealed that majority (80%) of the subjects had inadequate knowledge, 56.66% had neutral attitude and had 53.33% average practices regarding prevention of protein energy malnutrition. Significant positive correlation was found in attitude and practice only. Knowledge was significantly more adequate in higher education, housewives in joint families, higher income group and in mixed diet takers than their counterparts. Attitude was significantly more favourable in higher education, housewives and in joint families than their counterparts. Practice was significantly good in higher age, housewives and higher income families than their counterparts.

Keywords: Mothers of Fewer than Five Children, Protein Energy Malnutrition (PEM), Associating Factors, Knowledge Attitude and Practices (KAP).

I. INTRODUCTION

Protein energy malnutrition is a wide spread type of under nutrition among the underprivileged in tropical and subtropical countries. It is caused by a diet that is severely deficient in protein and contains less than adequate calories. Kwashiorkor occurs in infants and children between 4 months and 5 years of age. Marasmus is a form of under nutrition caused by inadequate calorie intake occurring chiefly during the first year of life .¹

Under nutrition is widely recognized as a major health problem in the developing countries of the world. The frequency of under nutrition cannot be easily estimated from prevalence of commonly recognized clinical syndrome of malnutrition such as marasmus and kwashiorkor because these constitute only proverbial tip of the iceberg. Cases with mild to moderate under- nutrition are likely to remain unrecognized because clinical criteria for their diagnosis are imprecise and difficult to interpret accurately. Growing children are most vulnerable to effects of under nutrition. Nutritional status of children is an indicator of nutritional profile of the entire community.²

Nutritional status plays a vital role in the deciding the health status particularly in children. Nutritional deficiencies give rise to various morbidities, which in turn may lead to increased mortality. Under nutrition also is known factor closely associated with child mortality? Nutritional status is a sensitive indicator of community health and nutrition. About 120 million (70%) of the worlds, 182 million

stunted children aged under 5 years live in Asia. Analysis of six longitudinal studies by World health organization's revealed a strong association between severity of weight for age deficits and mortality rates. About 54% deaths of fewer than five children's in developing countries were accompanied by low weight for age. Attempt to reduce child mortality in developing countries through selective primary health center have focused primarily on prevention and control of specific infectious disease.³

Growth faltering and malnutrition are highly prevalent in most South Asian countries. Among the serious consequences, malnutrition is increased in risks of morbidity and mortality in children as well as deficits in physical stature and lowered cognitive measures. Childhood malnutrition in poor households has been well documented in India, with the highest rates observed in those aged 12-23 months. Countrywide National Family Health Survey II data show mean underweight prevalence increases from 11.9% below 6 months infants to 58.4% at 12-23 months of age. The intervention group as a whole had improved feeding practices.⁴

A National Family Health Survey report shows that 4 out of every 10 children in the Karnataka state are undernourished, born stunted or too short for their age. About 70% of the children in the state in the age group of 6 to 59 months are anaemic.⁵

Many other studies⁶⁻⁸ showed that the morbidity of protein energy malnutrition is very high in children in spite of adequate interventions were taken by the government. There are many associating factor of that, among this factor knowledge of mother is one important factor.

Hence the investigator conducted a study to find out associating factors with knowledge, attitude and practice of rural mothers of fewer than five children regarding prevention of protein energy malnutrition.

II. METHODOLOGY

This community based descriptive observational study was conducted in rural area of Dhand, Amer, Jaipur, Rajasthan during year 2018.

This study was conducted on 300 mothers of under five children residing in Dhand for more than one year. Mothers who are not available at the time of survey were excluded from study. These mothers were interrogated as per questionnaire and were observed for feeding practices.

Structured questionnaire schedule had four parts, Section 'A' includes demographic data of the mother, children and the family, Section 'B' had 20 structured questions for assessing knowledge, Section 'C' includes 10 questions for assessing the attitude of the mothers of under five children with a five point likert scale and Section 'D' consist of 10 multiple choice questions to assess the practices of mothers of under five children regarding PEM.

Maximum score of knowledge is 20. Inadequate knowledge is score <50%, Moderate is 50-75% and adequate is when scores are >75%. Likewise maximum score for attitude is 50; Unfavourable attitude - <50% Score, Neutral attitude when scores 50 - 75% and > 75% scores Favourable attitude.

Maximum score of practice is 10; Poor practices <50% Scores, Average practices when scores are 50-75% and >75% scores is Good practices.

Data was entered in Microsoft excel version 2010. Frequency and percentage distribution were used to study the knowledge, attitude and practices. Pearson's correlation was used to correlate the knowledge,

attitude and practices. Chi-square test was used to find out associations of knowledge, attitude and practices of the sample with that of the selected demographic variables.

III. RESULTS

In the present study, out of 300 mothers of under five children, 240 (80%) of the mothers have inadequate knowledge, 60 (20%) mothers of under five children have moderate knowledge and none of them are having adequate knowledge. (Figure 1)

Out of 300 mothers of under five children, majority of 170 (56.66%) mothers of under five children belongs to neutral attitude, 130 (43.33%) mothers of under five children had favourable attitude and none of them had unfavourable attitude. (Figure 2)

Out of 300 mothers of under five children, 160(53.33%) of the mothers of under five children had average practices, 110(36.66%) of the mothers of under five children follow poor practices and 30(10%) mothers of under five children follows good practices. (Figure 3)

Figure 1

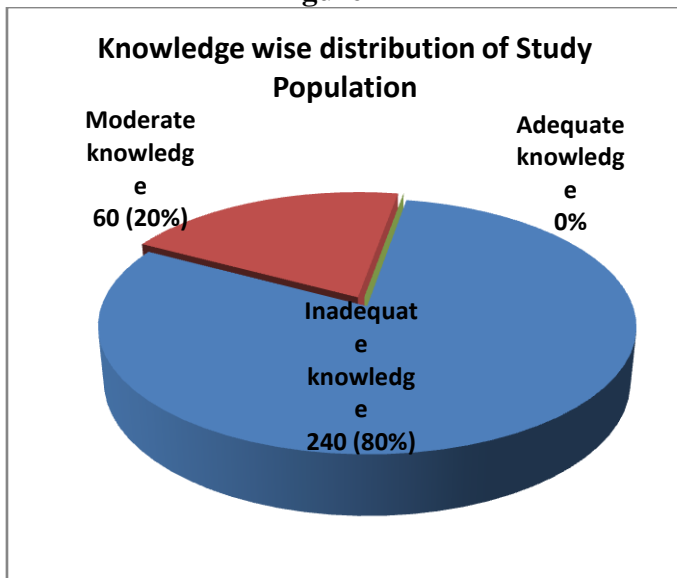


Figure 2

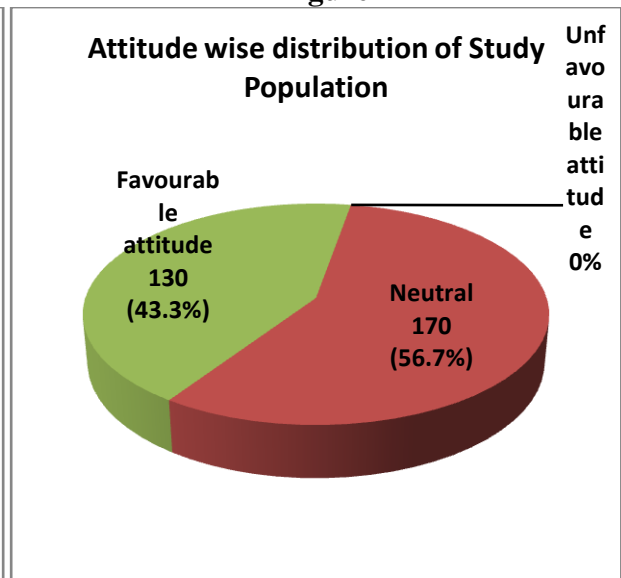
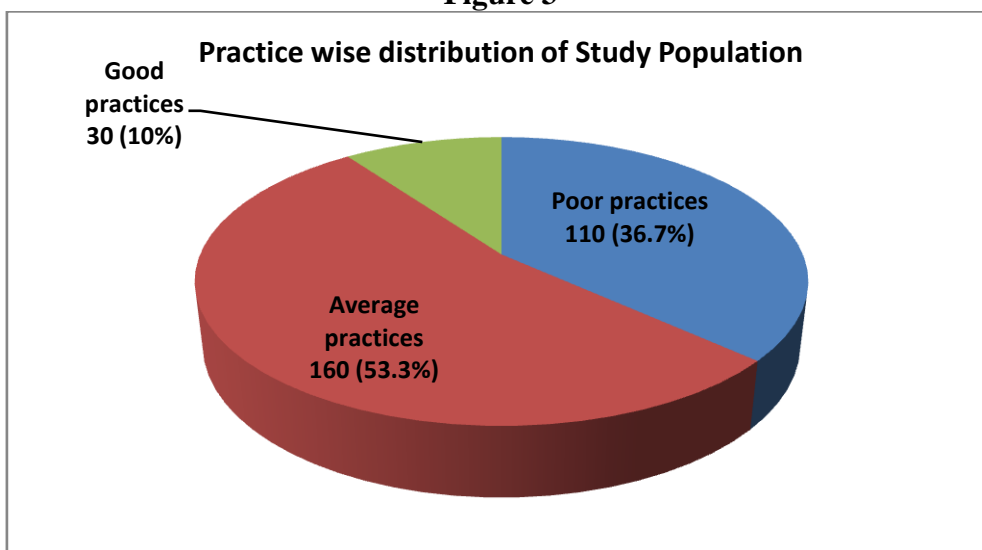


Figure 3



The coefficient of correlation (r- value) between knowledge v/s attitude is 0.234 (P=0.072) shows that there is positive correlation but it was not significant. The coefficient of correlation (r- value) between knowledge vs practice is 0.245 (P= 0.059) indicates that there is a positive correlation but it was also not significant. (Table 1)

The coefficient of correlation (r- value) obtained between attitude vs practice is 0.359 (P= 0.005) gives the information of positive correlation. There is significant correlation found between attitude and practices as the $P \leq 0.05$. (Table 1)

Table 1
Correlation between Knowledge, Attitude and Practice scores of study population (N=300)

Variables	Pearson correlation (r)	P value
Knowledge vs Attitude	0.234	0.072
Knowledge vs Practice	0.245	0.059
Attitude vs Practice	0.359	0.005

When association of knowledge with socio-demographic variables were analysed it was found that education, occupation, type of family, income and type of diet were found to associated ($p < 0.05$). Knowledge was significantly more adequate in higher education, housewives in joint families, higher income group and in mixed diet takers than their counterparts. (Table 2)

Table 2
Association of knowledge with socio-demographic characteristics of Study Population (N=300)

S. No.	Variables	Frequency (N=300)	Knowledge level			P Value LS	
			Inadequate (N=240)	Moderate adequate (N=60)	Adequate (N=0)		
1	Age in years	≤20	20	15	5	0	0.505 NS
		21-25	180	150	30	0	
		26-30	80	60	20	0	
		>30	20	15	5	0	
2	Education	Illiterate	60	50	10	0	<0.001 S
		Primary school	40	35	5	0	
		High school	95	75	20	0	
		PUC/Diploma	75	65	10	0	
		Others	30	15	15	0	
3	Occupation	Coolie	25	20	5	0	<0.001 S
		Housewife	230	190	40	0	
		Business	5	0	5	0	
		Any other	40	30	10	0	
4	Type of family	Nuclear	110	65	15	0	<0.001 S
		Joint	150	125	25	0	
		Broken	25	10	15	0	
		Single parent family	15	10	5	0	
5	Income	>10000	35	35	0	0	<0.001 S
		5000-10000	90	80	10	0	
		3000-5000	100	65	35	0	
		<3000	75	60	15	0	
6	Type of food	Vegetarian	65	45	20	0	0.023 S
		Mixed	235	195	40	0	

When association of attitude with socio-demographic variables were analysed it was found that education, occupation and type of family were found to associated ($p < 0.05$). Attitude was significantly more favourable in higher education, housewives and in joint families than their counterparts. (Table 3)

Table 3
Association of attitude with socio-demographic characteristics of Study Population (N=300)

S. No.	Variables	Frequency (N=300)	Attitude level			P Value LS	
			Unfavourable (N=0)	Neutral (N=170)	Favourable (N=130)		
1	Age in years	≤20	20	0	15	5	0.113
		21-25	180	0	95	85	
		26-30	80	0	45	35	NS
		>30	20	0	15	5	
2	Education	Illiterate	60	0	45	15	<0.001
		Primary school	40	0	35	5	
		High school	95	0	40	55	S
		PUC/Diploma	75	0	30	45	
		Others	30	0	20	10	
3	Occupation	Coolie	25	0	20	5	0.010
		Housewife	230	0	120	110	
		Business	5	0	5	0	S
		Any other	40	0	25	15	
4	Type of family	Nuclear	110	0	75	35	0.006
		Joint	150	0	70	80	
		Broken	25	0	15	10	S
		Single parent family	15	0	10	5	
5	Income	>10000	35	0	15	20	0.423
		5000-10000	90	0	50	40	
		3000-5000	100	0	60	40	NS
		<3000	75	0	45	30	
6	Type of food	Vegetarian	65	0	40	25	0.303
		Mixed	235	0	120	105	NS

When association of practice with socio-demographic variables were analysed it was found that age, occupation and income of family were found to associated ($p < 0.05$). Practice was significantly good in higher age, housewives and higher income families than their counterparts. (Table 4)

Table 4
Association of practice with socio-demographic characteristics of Study Population (N=300)

S. No.	Variables	Frequency (N=300)	Practice level			P Value LS	
			Poor (N=110)	Average (N=160)	Good (N=30)		
1	Age in years	<20	20	5	15	0	0.002
		21-25	180	60	105	15	
		26-30	80	35	30	15	S
		>30	20	10	10	0	
2	Education	Illiterate	60	25	35	0	0.187
		Primary school	40	15	20	5	
		High school	95	30	55	10	NS
		PUC/Diploma	75	30	35	10	
		Others	30	10	15	5	
3	Occupation	Coolie	25	5	17	3	<0.001
		Housewife	230	75	133	22	
		Business	5	1	4	0	S
		Any other	40	30	5	5	

4	Type of family	Nuclear	110	45	55	10	0.276
		Joint	150	55	80	15	
		Broken	25	5	15	5	
		Single parent family	15	5	10	0	NS
5	Income	>10000	35	15	15	5	<0.001
		5000-10000	90	35	45	10	
		3000-5000	100	15	80	5	
		<3000	75	45	20	10	
6	Type of food	Vegetarian	65	20	40	5	0.320
		Mixed	235	90	120	25	NS

IV. DISCUSSION

The present study revealed that majority (80%) of the subjects had inadequate knowledge, 56.66% had neutral attitude and had 53.33% average practices regarding prevention of protein energy malnutrition

A study reported that stunting was associated with low socioeconomic status and poor sanitation of the area, three or more siblings, low birth weight < 2,500 g, child age < 36 months and mother's age < 20 years. Overweight and stunting were the major anthropometric problems and therefore should be a priority for public policies.⁹

In present study, correlation between knowledge vs attitude is 0.234 (P=0.072) i.e. not significant positive correlation whereas it was 0.359 (P=0.005) i.e. significant positive correlation between attitude vs practice. The above study is supported by a cross sectional design to describe prevalence of malnutrition and their correlates of nutrient and traditional food consumption in rural Dalit mothers. Dalit mothers (n= 220) with young children were recruited from 37 villages in the Medak District of rural Andhra Pradesh, India. The results show the prevalence of chronic energy-deficient mothers was 58%. Illiterate women and active women were more likely to have Chronic Energy Deficient than those literate and non-active (P < or = 0.05).¹⁰ Another cross-sectional survey was conducted on mothers attitude and practices in infant feeding, in Saudi Arabia. Approximately 92% fed colostrum to the newborn, but 76.1% had introduced bottle-feeding by 3 months (48.3% cited insufficient milk as the reason for introducing the bottle).¹¹

Coefficient of correlation (r- value) between knowledge vs practice is 0.245 (P= 0.059) i.e. not significant positive correlation. The above finding is supported by the study Nutritional problems like protein energy malnutrition (PEM), anemia and vitamin A deficiency continue to plague a large proportion of Indian children. Most common causes of malnutrition include faulty infant feeding practices, impaired utilization of nutrients due to infections and parasites, inadequate food and health security, poor environmental conditions and lack of proper child care practices. High prevalence of malnutrition among young children is also due to lack of awareness and knowledge regarding their food requirements and absence of a responsible adult care giver.¹²

In present study, knowledge was significantly more adequate in higher education, housewives in joint families, higher income group and in mixed diet takers than their counterparts. Attitude was significantly more favourable in higher education, housewives and in joint families than their counterparts. Practice was significantly good in higher age, housewives and higher income families than their counterparts.

A study conducted to determine the feeding and weaning practices, knowledge and attitudes towards nutrition of mothers/caregivers of children up to 3 years old attending baby clinics in the Moretele district (South Africa). The participant's nutrition knowledge regarding specific foods, their functions and recommended quantities was poor. The women adhered to their cultural beliefs regarding food choices and preparation practices. The data analysis revealed that inadequate nutrition knowledge and adherence to cultural practices lead to poor-quality feeding practices. Nutrition knowledge needs to be changed in a first step towards implementing improved feeding practices.¹³

Another study reported that nutritional illiteracy and mothers' erroneous beliefs result in 50% of the mothers having inadequate feeding practices.¹⁴

Another study also reported that overcrowding, low maternal income and the use of infant formula feeds in children who have attained the age of 6 months and above were associated with a higher prevalence of wasting ($P = 0.029$, $P = 0.031$ and $P = 0.005$ respectively).¹⁵

V. CONCLUSION

The results revealed that majority (80%) of the subjects had inadequate knowledge, 56.66% had neutral attitude and had 53.33% average practices regarding prevention of protein energy malnutrition. Significant positive correlation was found in attitude and practice only. Knowledge was significantly more adequate in higher education, housewives in joint families, higher income group and in mixed diet takers than their counterparts. Attitude was significantly more favourable in higher education, housewives and in joint families than their counterparts. Practice was significantly good in higher age, housewives and higher income families than their counterparts.

So improvement in living standard of families, home empowerment of mothers with the aim of augmenting family income and parental education on appropriate feeding practices may help in reducing the incidence of under-five malnutrition in communities

CONFLICT OF INTEREST

None declared till now.

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