

# Knowledge attitude and practices of mothers of fewer than five children regarding prevention of Protein Energy Malnutrition

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**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 assess 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. It was found that 80% of mothers of fewer than five children had inadequate knowledge, 43.3% were having favorable attitude and only 10% were having good practices regarding prevention of PEM. So it was concluded from this study that mothers of fewer than five children had poor knowledge of PEM and were not much aware regarding prevention of PEM. It is suggested that IEC activities should be done in this area regarding PEM and its prevention.*

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

## I. INTRODUCTION

Malnutrition is a manmade disease which often starts in the womb and ends in the tomb. It is a global problem especially in developing countries in even in under privileged communities of some developed countries. This is particularly true of developing countries where the population growth is not controlled and resources are poor. The United Nation International Child Emergency Fund in 2005 reported that 150 million children are malnourished worldwide; millions of Indian children are equally deprived of their rights to survival, health, nutrition, education and safe drinking water. It is reported that 63 % of them go to bed hungry, 53% suffer from malnutrition.<sup>1</sup>

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.<sup>2</sup>

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.<sup>43</sup>

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 under 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.<sup>4</sup>

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.<sup>5</sup>

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. The National Nutrition Monitoring Bureau report shows the consumption of green leafy vegetables, roots and tubers, milk and milk related products, fats and oils is low in Karnataka. Considering that some state -run programmes, like the Integrated Child Development Scheme (ICDS), have been on since 1975, it is surprising that the state is still unable to address the issue of malnutrition. The ICDS programme is on in 54, 260 anganwadi's in the state. Around 44 lakhs beneficiaries, including pregnant women, lactating mothers and anganwadi workers are availing of the benefits. "With Rs. 2 per beneficiary, it will take time to achieve complete control on malnutrition and the government is planning to increase the amount to Rs. 4 per child beneficiary".<sup>6</sup>

Many other studies<sup>7-9</sup> showed that the morbidity of protein energy malnutrition is very high in children in spite of adequate interventions was taken by the government. Hence this study was conducted to assess 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 fewer than 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 following four parts:-

**Section 'A'**: It consists of details demographic data of the mother, child and the family.

**Section 'B':** This section includes assessing the knowledge of the mothers of under five children with a structured questionnaire. This includes 20 structured questions, which are categorized under two headings.

- Knowledge on protein energy malnutrition-10 items
- Knowledge on prevention of protein energy malnutrition-10 items

All the questions in this section were multiple choice questions with three distracters and one correct answer. Each correct answer was awarded a score of '1' mark and each wrong answer is given the score of '0'. The maximum score of this structured interview schedule was 20. The resulting score was interpreted as follows:-

- Inadequate knowledge - <50% Score
- Moderate knowledge - 50-75% Score
- Adequate knowledge - >75% Score

**Section 'C':** This section includes assessing the attitude of the mothers of fewer than five children with a five point likert scale and the data is collected by structured interview schedule. It consists of 10 items. The likert scale consist 5 attitudinal statements on “strongly agree”-SA, “agree-A”, “undecided- UD”, “disagree- DA”, “strongly disagree-SDA”. The maximum score is 50; the resulting score was interpreted as follows:-

- Unfavourable attitude - <50% Score
- Neutral attitude - 50 - 75% Score
- Favourable attitude - >75% Score

**Section 'D':** This section includes assessing the practices of the mothers of fewer than five children with a structured questionnaire It consists of 10 multiple choice questions. Each correct answer was awarded a score of '1' and wrong answer was awarded a score of '0'. The maximum score of this section is 10. The various scores were interpreted as follows.

- Poor practices - <50% Score
- Average practices - 50-75% Score
- Good practices - >75% Score

The Data was entered in Microsoft excel version 2010. Frequency and percentage distribution were used to study the demographic variables of the mother and family such as age, education, occupation, type of family, income and type of food. Mean, median and standard deviation were used to assess the level of knowledge, attitude and practices of mothers of under-five children regarding prevention of protein energy malnutrition within selected demographic variables

### III. RESULTS

In the present study, out of 300 mothers of under fives, 180 (60%) belongs to 21 to 25 years of age group, 80(26.7%) were in the age group of 26 to 30 years and 20 (6.7%) belongs to <20 years and >30years. (Table 1)

Education wise the distribution of the subjects showed that 95 (31.7 %) mothers had high school education, 75 (25 %) mothers had education up to PUC/ Diploma, 60 (20%) mothers were illiterates, 40 (13.3%) mothers had primary school education and 30 mothers (10%) had others includes degree and postgraduates. (Table 1)

In relation to the occupation of the mother of under five children, 230 (76.7%) mothers were housewives, 40 (13.3%) mothers had other occupation, 25 (8.3%) mothers were coolie and 5 (1.7%) mother handling business. (Table 1)

With respect to type of family, 150 (50%) mothers belongs to joint family, 110 (36.7%)mothers belongs to nuclear family, 25(8.3%)mothers belong to broken family and 15(5.0%)mothers belongs to single-parent family. (Table 1)

Regarding income of the family, 100 (33.3%) mother's family earn up to 3000-5000, 90(30%) mother's family earn above 5000/month, 75 (25%) mother's families of <3000/-month and about 35 (11.7%) mothers belongs to >10,000/- month. (Table 1)

Coming to type of food maximum number of the mothers 235 (78.3%) belongs to mixed type of food (i.e. the people prefer to eat both vegetarian and nonvegetarian food pattern) and minimum number about 65 (21.7%) mothers belongs to pure vegetarian (Table 1)

**Table 1**  
**Characteristics of Study Population (N=300)**

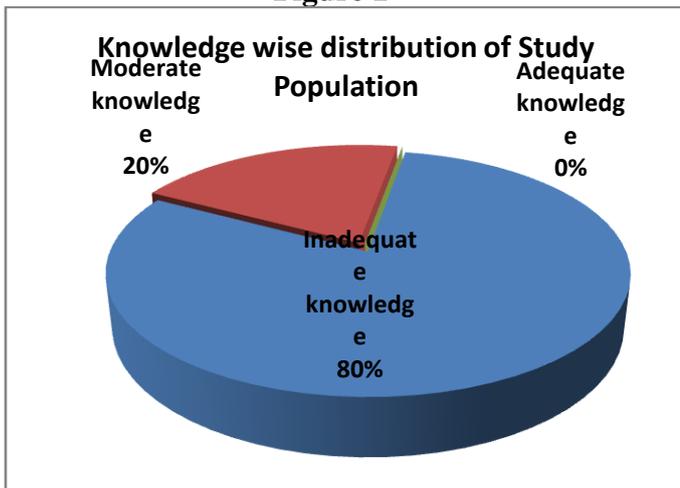
S. No.	Variables	Frequency	Percentage (%)
1	Age in years	≤20	6.7
		21-25	60
		26-30	26.7
		>30	6.7
2	Education	Illiterate	20.0
		Primary school	13.3
		High school	31.7
		PUC/Diploma	25.0
		Others	10.0
3	Occupation	Coolie	8.3
		Housewife	76.7
		Business	1.7
		Any other	13.3
4	Type of family	Nuclear	36.7
		Joint	50.0
		Broken	8.3
		Single parent family	5.0
5	Income	>10000	11.7
		5000-10000	30.0
		3000-5000	33.3
		<3000	25.0
6	Type of food	Vegetarian	21.7
		Mixed	78.3

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)

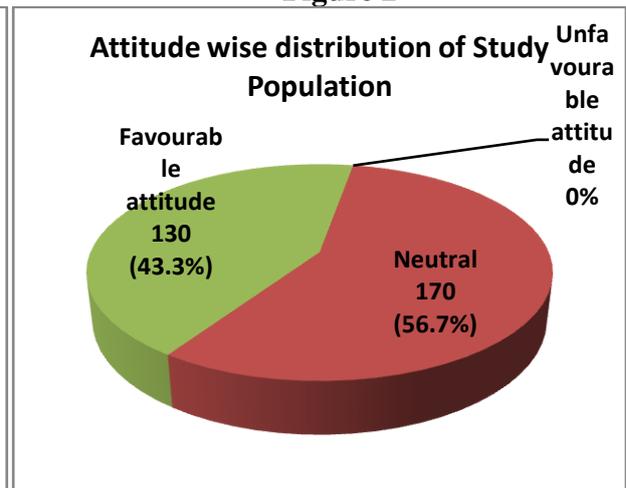
Out of 300 mothers of under five children, majority of 170 (56.66%) mothers of under five children belongs to neutral attitude, 130 (43.33%) mothers of under five children had favourable attitude and none of them had unfavourable attitude. (Figure 2)

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)

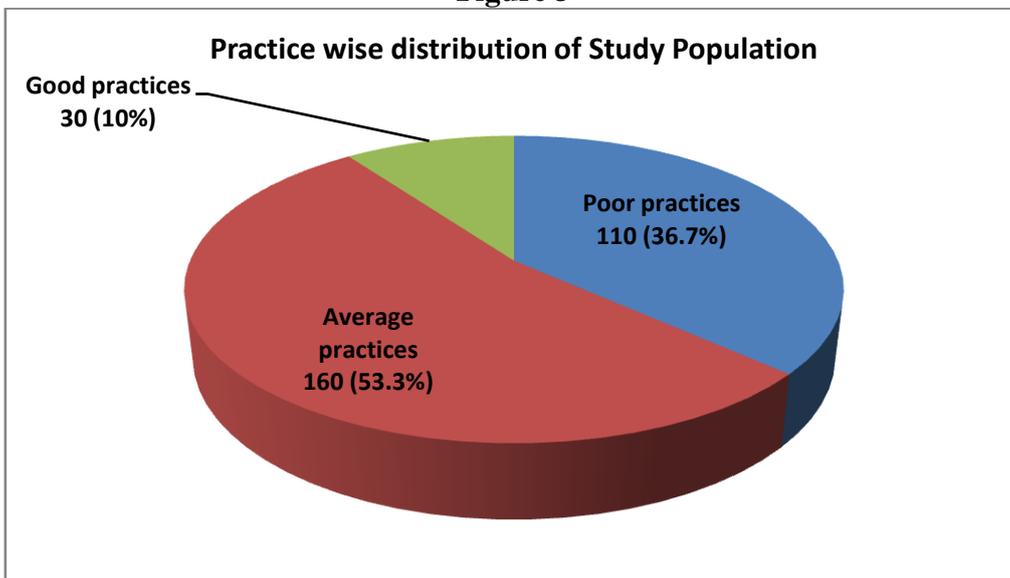
**Figure 1**



**Figure 2**



**Figure 3**



Out of total 10 scores of knowledge on protein energy nutrition mean score was 3.42 (34.2 mean %). Likewise, out of total 10 scores knowledge on prevention of protein energy malnutrition mean score was 4.12 (41.2 mean %). Total mean score for knowledge was 7.52 out of total 20 score i.e. mean% score 37.6. Mean score for attitude and practice were 37 (out of total 50) and 4.95 (out of total 10) respectively so mean % score were 74% and 49.5% respectively.

**Table 2**  
**Knowledge, Attitude and Practice Scores of Study Population**

S. No.	Areas	Max Score	Range	Mean	Mean (%)	Median	SD
1	Knowledge on protein energy nutrition	10	0-8	3.42	<b>34.2</b>	3	2.02
	Knowledge on prevention of protein energy malnutrition	10	1-7	4.12	<b>41.2</b>	4	1.54
	Knowledge total score	20	2-14	7.52	<b>37.6</b>	7	2.67
2	Attitude	50	27-48	37	<b>74</b>	37	4.3
3	Practice	10	0-9	4.95	<b>49.5</b>	5	2.06

#### IV. DISCUSSION

The present study 240(80%) of the mothers of under five children have inadequate knowledge, 60 (20%) mothers of under five children have moderate knowledge and none of them are having adequate knowledge

A cross-sectional study was conducted on 400 children less than three years of age, residing in the rural area of district Malir, Karachi. 319 mothers (79.75%) were illiterate and 81 (20.25%) were literate. Maximum malnutrition regarding stunting (40.75%) was seen in children whose mothers were illiterate and maximum underweight (57.89%) was seen in children whose mothers had education up to primary level and maximum wasting (33.33%) was seen in children whose mothers (only 3 mothers out of 400) were graduates.<sup>10</sup>

Appoh LY et al conducted a descriptive study to know the relationship between mother's nutritional knowledge, maternal education, and child nutritional status (weight- For-age ) in Volta region, Ghana. They reported that mother's practical knowledge about nutrition may be more important than formal maternal education for child nutrition outcome.<sup>11</sup>

As indicated above in order to combat with this malnutrition, an uplift of mother's literacy status is badly needed especially in the rural areas.

In present study, majority (56.66%) mothers of under five children belongs to neutral attitude, 43.33% mothers of under five children had favourable attitude and none of them had unfavourable attitude.

The above findings is supported by a study conducted to identify mother's attitude and concern regarding child weight and feeding practices and also to explore the importance of growth monitoring activity in preventing Protein, Energy Malnutrition (PEM). The result shows that attitude towards feeding during illness; most mothers of a well-nourished child believe that feeding during illness is better for recovery.<sup>12</sup>

In present study, 53.33% of the mothers of under five children had average practices, 36.66% of the mothers of under five children follow poor practices and 10% mothers of under five children follows good practices.

The above findings is supported by a cross sectional study conducted to explore whether socioeconomic and sanitary conditions, maternal and child factors are associated with overweight, stunting, and wasting in children under five year old in the city of São Leopoldo, southern Brazil. The study shows 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.<sup>13</sup>

Baig-Ansari N, et. al done a cross-sectional survey to assess the prevalent care and feeding practices among children aged 6 to 18 months residing in the squatter settlements of Karachi and to identify care and feeding practices, as well as any other underlying factors, associated with stunting. A total of 433 mothers of eligible children were interviewed with the use of structured questionnaires. The result conclude that there is a significant association between the child's gender and house hold food insecurity was found and females are more affected than males.<sup>14</sup>

## V. CONCLUSION

It was found that 80% of mothers of fewer than five children had inadequate knowledge, 43.3% were having favorable attitude and only 10% were having good practices regarding prevention of PEM. So it was concluded from this study that mothers of fewer than five children had poor knowledge of PEM and were not much aware regarding prevention of PEM. It is suggested that IEC activities should be done in this area regarding PEM and its prevention.

## CONFLICT OF INTEREST

None declared till now.

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