

## A Comparative Study to assess the Knowledge regarding Protein Energy Malnutrition among the Mothers of Under-Five Children in theselected rural and urban area of Kanpur

Jasmi Johnson, Alan V. Joseph, Akurathi Mary Madhuri, Adarsh Kumar, Moni Sachan

Faculty of Nursing, Rama University, Kanpur, Uttar Pradesh, India

Email id: dean.nursing@ramauniversity.ac.in

### Abstract

A comparative study was conducted to evaluate the knowledge regarding protein energy malnutrition among the mothers of under-five children in the selected rural and urban area of Kanpur. Non probability convenient sampling technique was used to select 60 samples with mother of under-five children of which 30 were in rural area and 30 were in urban area. The validity and reliability of tool was established. Closed ended questionnaire were used to collect the data. The data was collected and analyzed by using descriptive and inferential statistics. The result of the study revealed that, In the rural area- There 20% mothers had inadequate knowledge, 70% mothers had moderate knowledge, 10% mothers had adequate knowledge. In urban area:-There 3.33% mothers had inadequate knowledge, 83.33% mothers had moderate knowledge, 13.34% mothers had adequate knowledge regarding protein energy malnutrition. The overall mean was in urban area 16.78, in the rural area 14.4 and SD in the urban area was 4.005, in the rural area was 30.84.

**Key words:** Protein energy malnutrition, Under five children

## 1 Introduction

Nutritional deficiency disorders are the major health problems in India and other developing countries. They affect vast majority number of population and responsible for approximately number of 55% of childhood death. They considered as leading illness and significant cause of childhood mortality and morbidity.[1]

In India, there are about 60 million malnourished children and 11lack of children are dying due to effect of malnutrition. About 75-80% of hospitalized children suffer from degree or type of malnutrition. Approximately 25% pediatric beds are occupied patients whose major problem is malnutrition or in whom malnutrition is indirectly responsible malnutrition. People are consider to be malnourished when they don't consume adequate calories, protein and nutrients to satisfy their bodies' growth and main requirements.[2]

According to WHO, 2006, severe malnutrition is directly implicated in over a million child deaths each year. Moderate malnutrition has much higher prevalence than severe malnutrition and responsible for a greater number of child death annually.[3]

the recent studies and statistics throws the light that Protein energy malnutrition is an important problem in this

contemporary approach and more under Five children are affected with Protein energy malnutrition. This is mainly due to unhealthy Environment and poor knowledge among the parents regarding the disease condition. So it is evident that children especially under-fives are vulnerable to this disease condition and through teaching programmes the mortality and morbidity rate can be controlled and Prevented to a great extent. So the investigator is very much interested in doing this topic.[4]

A high increase in the incidence of wasting was noted in Punjab, Goa, Maharashtra, Karnataka, and Sikkim. The prevalence of underweight children was found to be higher in rural areas 38% than urban areas 29%. According to WHO, infants weighing less than 2.5 Kg are 20 times more likely to die than heavier babies.[5]

Over the decade between 2005 and 2015, there has been an overall reduction in the proportion of underweight children in India, mainly an account of an improvement in stunting. While the percentage of stunted children under reduced from 40% - in 2005 - 2006 to 38.4% in 2015-16, there has been a raise in the percentage of children who are wasted from 19.8% to 21% during this period.[6]

## 2 Objectives of the study

- 1 To assess the knowledge level of the rural mothers of under-five children regarding protein energy malnutrition.
- 2 To assess the knowledge level of the urban mothers of under-

five children regarding protein energy malnutrition.

- 3 To find out the association between knowledge level of mothers of under five children with socio demographic variables.
- 4 To compare the knowledge score of rural and urban mothers.

### 3 Material and methods used

**Research design:** comparative descriptive design was used for the study

**Research approach:** Comparative cross sectional survey approach was adopted in the present study.

**Setting of the study:** The study was conducted in rural and urban area of Ramnagar and Kalyanpur, Kanpur.

**Population:** Population of the present study was mothers of under-five children who fulfilled the inclusion criteria.

**Sample size:** Sample comprised of 60 mothers. 30 sample from the rural area and 30 samples from the urban area.

**Sampling technique:** Non-probability convenient sampling technique was used to select the all mothers who have under-five children.

#### Variables

**Research variable:** Knowledge among the mothers of under-five children regarding protein energy malnutrition was the research variable in the study.

**Demographic variable:** The demographic variables are age, education, no of children, monthly income, religion, dietary pattern, type of family, economic class, occupation, source of information.

**Sampling criteria:**

**Inclusion criteria:**

- Mothers of under-five children
- Children suffering with protein energy malnutrition.
- Available at the time of data collection.
- Who knew Hindi.

**Exclusion criteria:**

- Mothers who were working in the health sector.
- Who couldn't follow the instructions. (physically and psychologically ill mothers or challenged.)

### 4 Development and description of tools used in the study

The tools used for the study was structured questionnaire. Tool consist of two parts-

**Section A:** Consisted of demographic data age, education, number of children, monthly income, religion, dietary pattern, type of family, economic class, occupation, source of information.

**Section B:** consist of question related to protein energy malnutrition.

### 5 Data collection procedure

The data collection was completed within the period of 2 weeks, from 9.4.18 to 25.4.18. After obtaining permission from the ethical committee the investigators approached the mothers of under-five children and explained them the purpose of the study. They were assured that the all data would be kept strictly confidential and would be used only for the study purpose. After obtaining their willingness data were collected from 60 mothers of under-five child in the Ramnagar and Kalyanpur area.

**Plan for Data Analysis** The data was obtained from 60 samples was analyzed by adopting appropriate statistical methods. Various diagram (pie bar, etc.) was prepared in accordance with various characteristics under study and percentage analyses were found.

### 6 Data analysis and major findings

#### 1. The percentage wise distribution of the mothers of under-five children according to their demographic variables.

**In rural area:** 40% mothers in between the age of 23-27 (highest) and 33.3% mothers were completed higher secondary and graduation education 63.4% mother having single child. 46.6% monthly income was <5000/-. 96.7% mothers were from Hindu family. 96.7% mothers were vegetarian. 66.6% of the mothers were belongs in joint family. 70% mothers were from middle class family. 87% mothers were homemaker. Majority of the mother were getting information from their family.

**In urban area:** The mothers in between the age of 23-27 were 36.6% and 26.7% in between the age of 28-32. 50% mothers were completed formal education, 56.67% mothers had two children. 33.33% families monthly income was <5000/- and 5001/- to 10000/-. Each 96.7% mothers were from Hindu family, 86.7% mothers were vegetarian. Most of them were belong in joint family. 53.8% mothers were from middle class family, Most of the mothers were (83.4%)

are homemakers and Majority of the mother were getting information from ASHA workers.

**2. Level of knowledge**

• **In the rural area:** There were 20% mothers having inadequate knowledge, 70% mothers having moderate knowledge, 10% mothers having adequate knowledge.

• **In urban area:** There were 3.33% mothers having inadequate knowledge, 83.33% mothers having moderate knowledge, 13.34% mothers having adequate knowledge

TABLE 1: Percentage wise distribution of under-five child’s mothers according to their knowledge score in urban area with mean, median and SD.

Level of knowledge	Score range	Frequency	Score In percent-age	Mean	S.D.
Inadequate	0-10	1	3.33%		
Moderate	11-20	25	83.33%	16.48	4.0
Adequate	21-30	4	13.34%		

Percentage distribution of mother knowledge score shows that 83.33% have moderate knowledge about protein energy malnutrition, 13.34% had adequate knowledge and 3.33% had inadequate knowledge.

TABLE 2: Percentage wise distribution of under-five child’s mothers according to their knowledge score in urban area with mean, median and SD.

Level of knowledge	Fre- quency	Percentage	Mean	S.D.
Inadequate	6	20%		
Moderate	21	70%	14.4	30.8
Adequate	3	10%		

Percentage distribution of mother knowledge score shows that 70% have moderate knowledge about protein energy malnutrition, 10% having adequate knowledge and 20% hav- ing inadequate knowledge.

The bar diagram in fig. 1, depicts that urban mother having good knowledge level than rural mother according to their level of knowledge

**3. Association between the demographic variables and knowledge score of subjects on knowledge regarding protein energy malnutrition both in rural and urban areas:**

• There was no association between the pre-test knowl- edge score and selected demographic variables such as in the urban area there was no significant association between knowledge score and demographic -variables like monthly

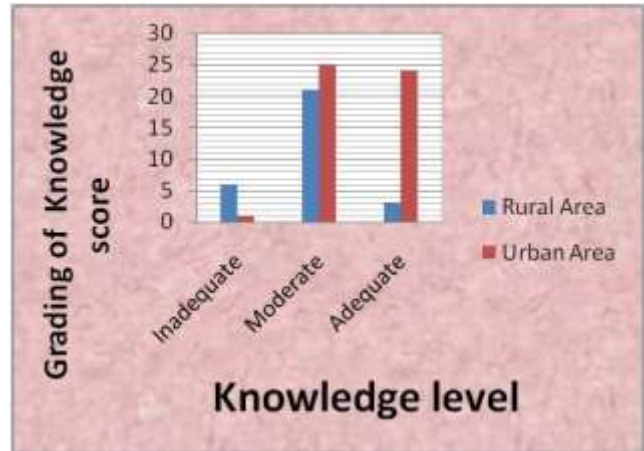


FIGURE 1: Comparison between rural and urban mothers according to their knowledge score.

income, economic class of the family, occupation type and source of information at the level of 0.05. Except age, educational status, number of children, religion, diet pattern, type of family.

• In the rural area there was no significant association between knowledge score and demographic -variables like age, educational status, no of children, religion, diet pattern, type of family, monthly in-come, economic class of the family, occupation type and source of information at the level of 0.05.

**7 Recommendations**

On the basis of findings it was recommended that:

- The similar study may be replicated on large scale.
- The similar study can be conducted to evaluate the knowl- edge on various malnutrition conditions.
- This study can be conducted in community health setting by using large sample of mothers.

**8 Conclusion**

The study significantly proved that there was a remarkable difference in the knowledge score of mothers of under five children regarding protein energy malnutrition. The knowl- edge of urban and rural mothers ,urban mothers had good knowledge (mean 16.48, SD 30.84) than the rural mothers (mean 14.4, SD 4.005).

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