Research Paper

Knowledge Regarding Protein Energy Malnutrition Among Mothers of Under Five Children Admitted in A Selected Hospital at Mangalore with A View to Provide Health Education

Medical Science

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ABSTRACT
Malnutrition is truly a global challenge. Adequate nutrition is essential in early childhood to ensure healthy growth, proper organ formation and function, for a strong immune system and neurological and cognitive development[1]. **Materials and methods:** *A descriptive approach was used for the present study. The participants were about 100 in number and purposive sampling technique was used. Data was collected by administering a structured knowledge questionnaire.* **Results:** *The results showed that 42% of mothers had an average level of knowledge about Protein Energy Malnutrition (PEM), 37% and 10% of them had poor and very poor level of knowledge and 11% of the mothers had good knowledge regarding PEM.* **Conclusion:** *Mothers had good knowledge regarding preventive aspects of Protein Energy Malnutrition. Keyword: Knowledge of mother, Protein energy malnutrition, Under five children.*

INTRODUCTION:

Under-nutrition starts as early as conception. Because of extensive maternal under-nutrition (underweight, poor weight gain during pregnancy, nutritional anemia and vitamin deficiencies), about 22% of the infants are born with low birth weight (2500g), as compared to less than 10% in the developed countries. Both clinical and sub-clinical undernutrition is widely prevalent even during early childhood and adolescence. Though the prevalence of florid forms of severe PEM surveys indicate that about 43% of below five year children suffer from sub-clinical under nutrition such as being underweight (weight for age <median-2SD of WHO child growth standards) about 48% are stunted (height for age <median-2SD) and about 20% are wasted (weight for height <median -2SD) which indicates that under-nutrition is of long duration. The studies have shown that there is a steep increase in the prevalence of being underweight among young children, from about 27% around six months of age, to a high of about 45% at twenty four months of age. This is attributable to faulty infant and young child feeding practices prevailing in the community [2].

According to UNICEF, WHO and The World Bank Joint Child Malnutrition, globally an estimated 165 million children under five years of age, or 26%, were stunted (ie, height-for -age below-2 SD) in 2011- a 35% decrease from an estimated 253 million in 1990. High prevalence levels of stunting among children under-five years of age in Africa (36% in 2011) and Asia (27% in 2011) remain a public health problem, one which often goes unrecognized. More than 90% of the world's stunted children live in Africa and Asia. An estimated 101 million children worldwide under five years of age, or 16%, were underweight (i.e, weight-for-age below -2SD) in 2011-a 36% decrease from an estimated 159 million in 1990. Although the prevalence of stunting and being underweight among children under-five years of age worldwide have decreased since 1990, overall the progress is insufficient and millions of children remain at risk. An estimated 52 million children under five years of age or 8%, were wasted in 2011- a 11% decrease from an estimated 58 million in 1990. Seventy percent of the world's wasted children live in Asia, most in South-Central Asia. These children are at substantial increased risk of severe acute malnutrition and death [3].

As per the National Family Health Survey (2006) report, 47% of children below five years of age are underweight, 46% of children are stunted and 17% of children are wasted [4].

OBJECTIVES:

- To assess the level of knowledge regarding Protein Energy Malnutrition among mothers of under -five children.
- To find the association between knowledge of mothers of under five children regarding Protein Energy Malnutrition and their selected demographic variables.

MATERIALS AND METHODS:

1. Setting: The study was conducted in pediatric general ward in Father Muller Medical College Hospital, Mangalore

2. Research approach: The approach used for this study was descriptive approach.

3. Research design: Descriptive design

4. Sample: 100 mothers of hospitalized under five children.

5. Sampling technique: purposive sampling method.

6. Inclusion criteria:
- All mothers of hospitalized under five children.
- Mothers who are willing to participate in the study

7. Exclusion criteria
Children of 0-5 years who are admitted in ICU.

8. Data collection instruments:
- Structured knowledge questionnaire
- Demographic proforma

9. Description of tool:
The tool consisted of two aspects:

Section 1: It is comprised of Baseline proforma with age of the child in years, gender, religion, type of family, education of father, education of mother, occupation of father, occupation of mother, family income, number of under five children, birth order of the child, type of diet, birth weight of the child, age group at which weaning started and treatment for the child.

Section 2: Structured knowledge questionnaire on Protein energy malnutrition that include questions regarding Growth and nutrition, Signs and symptoms, Prevention aspects.

10. Data collection procedure:
The investigator obtained permission to conduct the study from the concerned hospital authority and informed consent was taken from subjects. Simple random sampling technique was used. Data was collected through a structured knowledge questionnaire for assessing the level of knowledge regarding PEM. Immediately after collecting data, the level of knowledge of mothers was assessed through data analysis. On the second day, health education was given for those who had poor and average knowledge regarding Protein Energy Malnutrition.

Major findings of the study:
The data was analyzed presented and under the following heading:

Section 1: Frequency and percentage distribution of socio demographic characteristics of sample.

Section 2: Frequency and percentage distribution regarding knowledge of mothers regarding Protein Energy Malnutrition

Section 3: Mean, Standard deviation of knowledge level of mothers on Protein Energy Malnutrition.

Section 4: Description of domain wise mean, standard deviation and mean percentage of knowledge score.

Section 5: Association between the level of knowledge regarding Protein Energy Malnutrition with selected demographic variables.

Section 1:
• Data shows that (70, 70%) of the participants had under five children less than one year. About (7, 7%) were between age of 1-2 and 2-3 years. Data also revealed that the percentage of mothers having children between age of 3-4 and 4-5 were (10, 10%) and (6, 6%) respectively.

• Half of the participants (57, 57%) belonged to Muslim religion, while Hindus and Christians were (14, 14%) and (29, 29%) respectively.

• Half of the participants belonged to the joint family system, while (32, 32%) came from nuclear families and (18, 18%) were from extended families.

• Data shows that (54, 54%) of fathers had primary education and (32, 32%) had secondary education. Only (13, 13%) of them had pre-university education and one of them had no formal education mothers having primary and secondary education were (45, 45%) and (35, 35%) respectively, whereas, (16, 16%) had pre- university education and (4, 4%) had no formal education.

• Data reveals that (61, 61%) of the fathers were daily wages, while (18, 18%) were self-employed. Government employees and unemployed were (4, 4%) each and (13, 13%) Majority of the mothers (70, 70%) were unemployed and (20, 20%) of them were daily wage workers. (6, 6%) of them belong to self-employed while, private and Government employees were (3, 3%) and (1, 1%) respectively.

• Half of the families (55, 55%) had a monthly income less than 8000, while (30, 30%) families had an income of 8001-10,000 and (11, 11%) had an income 10,001-20,000. Families having an income greater than 10,000 were only (4, 4%).

• Data shows that most of the children (65, 65%) had birth weight of more than 2.5kg. While, children less than 1500gms and those within 1500-2500gms were (11, 11%) and (24, 24%) respectively.

• Data shows that (54, 54%) of the children started their weaning at the age of 6 months, whereas, (21, 21%) of them started after one year and (25, 25%) of them started weaning before the age of 6 months.

Section 2: Frequency and percentage distribution regarding knowledge of mothers regarding Protein Energy Malnutrition.

Figure-1
Figure-1 shows that majority of the mothers 42% (42) of them had an average level of knowledge about PEM, while, 37% (37), and 10% (10) of them had poor and very poor level of knowledge. None of them belonged to very good category. The data also revealed that 11% (11) of the mothers had good knowledge regarding PEM.

Section 3: **Mean, Standard deviation of knowledge level of mothers on Protein Energy Malnutrition.**

Table 1: Level of knowledge among mothers of under five children regarding Protein Energy Malnutrition

Table 1 reveals that mean percentage of level of knowledge among mothers of under five children regarding PEM was 69% with a Mean ± SD 17.95 ± 7.88.

Section 4: Description of domain wise mean, standard deviation and mean percentage of knowledge score.
Participants had (63.20%) of knowledge regarding the preventive aspects of Protein Energy Malnutrition and have (41.2%) of knowledge regarding growth and nutrition aspects. It also shows that mothers have least knowledge (31.40%) on signs and symptoms of Protein Energy Malnutrition.

Section 5: Association between the levels of knowledge regarding Protein Energy Malnutrition with selected demographic variables.
There was significant association between the level of knowledge among mothers of under five children and education of mother (p=0.002), education of father (p< 0.01), number of under- five children (p=0.01) and type of diet (p=0.04).

Discussion:
The gap between existing and expected level of knowledge of the mothers indicates that there is an urgent need for health education regarding health problems like Protein Energy Malnutrition. Thus, educating them can bring about prevention of various health problems in young children. Health education was given to 79 mothers who were having poor and average knowledge regarding Protein energy malnutrition.

A similar study was conducted by Bevoor and Darshan to evaluate the effectiveness of Planned Teaching Programme on knowledge on prevention and control of malnutrition among mothers of under five children residing in Vantmuri Primary Health Centre of Belgaum city, Karnataka. The results revealed that the knowledge scores of the mothers of under five children regarding malnutrition were 47 (72.31%) average whereas, in post test 51(78.46%) of Mothers had good knowledge and 14(21.54%) had average knowledge.[5]

Conclusion:
Mothers are the primary caretakers of children, their knowledge regarding the care of children with these conditions is very vital in reducing mortality and preventing complications. It is the responsibility of nursing personnel to update the knowledge of mothers about Protein Energy Malnutrition.

Figure-1: Frequency and percentage distribution regarding knowledge of mothers regarding Protein Energy Malnutrition.

Table-1: Level of knowledge among mothers of under five children regarding Protein Energy Malnutrition

N=100

	Mean ± SD	Mean %
Mothers' knowledge regarding PEM	17.95±7.88	69.00%

Total score= 26

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