PEM KNOWLEDGE FOR MOTHERS AND CHILDREN UNDER FIVE YEARS IN SELECTED AREA OF ODISHA

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Abstract:

Malnutrition is truly a global challenge. Protein energy malnutrition (PEM) is a major public health problem in India. This affects the child at the most crucial period of time of development, which can lead to permanent impairment in later life. 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.. PEM is measured in terms of underweight (low weight for age), stunting (low height for age) and wasting (low weight for height).A pre experimental study to assess the effectiveness of structured teaching programme through pamphlet on the knowledge among mothers of under five year children regarding PEM & its prevention in a village, Jamsera Odishain the year 2021-2022 was undertaken by Professor Prativa Roulas a departmental study, towards the fulfillment of the requirement of community people needs of adopted areas by Dr. Ambedkar Institute of Medical Science District Sundargarh, Odisha state.

***Keywords**: PEM, Malnutrition, organ, immune system, neurological, cognitive, knowledge, mother, children.*

Introduction

Children are future of society and mothers are guardian of that future, foremost, health, safety and nutrition for the young child is written on behalf of young children everywhere. Ultimately, it is the children who benefit from having parents who understand and know how to protect and promote their safety and well-being by knowing regarding nutrition. Nutrition is the provision, to cells and organisms, of the materials necessary (in the form of food) to support life. Many common helath problems can be prevented or alleviated with a healthy diet. Nutrients are organic & in organic complexes contained in food. There are six major classes of nutrients those are mainly carbohydrates, fats, minerals, protein, vitamins, and water. These nutrient classes can be categorized as either macronutrients (needed in relatively large amounts) or micronutrients (needed in smaller quantities). The macronutrients (excluding water) provide structural material (amino acids from which proteins are built, and lipids from which cell membranes and some signalling molecules are built, and lipids from which cell membranes and some signalling molecules are built), energy. Vitamins, minerals, fiber, and water do not provide energy, but are required for other reasons. A third class of dietary material, fiber, is also required, for both mechanical and biochemical reasons, although the exact reasons remain unclear.

Mother is the one who take care of the child, it is very important that she should need to have knowledge regarding care of under-five and nutrition which they need, under-fives are "age inbetween 0-5 years of child". Healthy eating and physical activity are essential for growth and development in childhood. To help children develop healthy eating patterns from an early age, it is important that the food and eating patterns to which they are exposed - both at home and outside the

home - are those which promote positive attitudes to good nutrition. Samuel Klein says that the nutritional status of patients with protein-energy malnutrition caused by gastrointestinal tract dysfunction can often be restored to normal if adequate nutritional support can be provided by dietary manipulations, enteral tube feeding, or parental nutrition. Wasting disorders, such as cancer, acquired immunodeficiency syndrome (AIDS), and rheumatologic diseses, characterised by involuntary loss of body weight and muscle mass in the setting of a chronic illness. These patients often experience wasting because of inadequate nutrient intake related to anorxia and possibly gastrointestinal tract dysfunction and metabolic abnormalities caused by alterations in regulatory hormones, cytokines and systemic inflammation. The alterations in metabolism are responsible for the greater loss of muscle tissue observed in these patients than in those with pure starvation or semistarvation.

Restoration of muscle mass is unlikely with nutritional support unless the underlying inflammatory disease is corrected. Weight gain that occurs after nutritional support is started is usually caused by increases in fat mass and body water, without significant increases in muscle tissue. Patients with critical illness exhibit marked metabolic alterations, manifested by increased energy expenditure, altered endogenous glucose production and lipolytic rates, and protein and energy requirementrs are increased in critically ill patients. However, providing aggressive nutritional support may ameliorate but does not prevent net lean tissue losses without correction of the underlying illness or injury. Balanced diet is essential for normal activities of life. Since there is enough food available, it can be improved through proper education and awareness. Good nutrition and proper feeding programs prevent illness and disabilities. Malnutrition continues to be an underlying cause of morbiditity and mortality in children under five years of age.

A healthy child in future becomes a healthy adult and the nation's health depends on these healthy adults. Children are valuable resources, and if the country ignores their health, it will become a nation of unwell citizens. The nutrition of children under the age of five is critical because it lays the groundwork for our future health, strength, intelligence, and vitality. As we enter the new millennium, India faces an increase in the prevalence of diseases caused by nutritional inadequacies. PEM (Protein Energy Malnutrition) has been discovered as a major health and nutritional problem in India in children under the age of five.

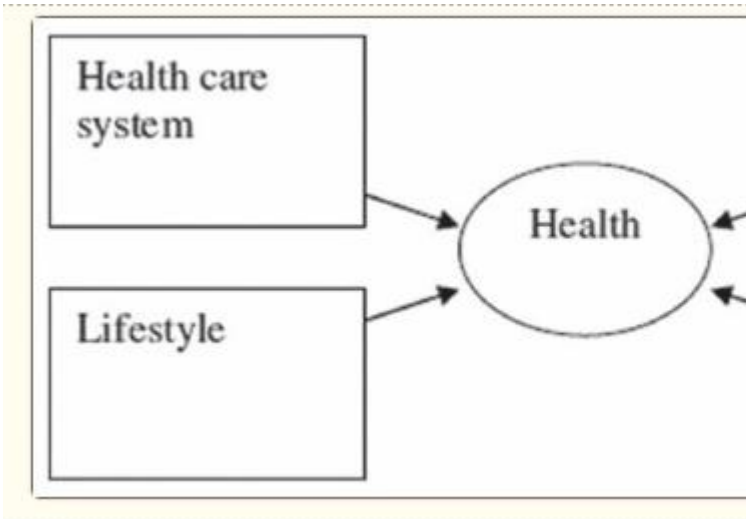

Figure: Health field model

Causes of protein energy malnutrition

The primary type of PEM is purely due to dietary deficiency. This begins at the fetal stage and continues into infancy and childhood. Nearly 25% of the pediatric hospital beds in India are occupied by

children suffering from malnutrition and around 80% of hospitalized children are malnourished to some extent, hence this contributes to the infant mortality ratio in a big way. Secondary malnutrition arises due to a serious illness like tuberculosis, cancer or inability of the body to absorb nutrients. For example in bowed disease like ulcerative colitis, metabolic syndromes and long standing gastroenteritis. Dietary factors contributing to PEM are inadequate breast feeding by the mother due to inability of mother's body to make milk due to inadequate nutrition, ignorance of weaning and weaning foods, inverted or cracked nipples in mother causing difficulty in breast feeding.

The incidence of protein energy malnutrition in children have been the subject of extensive research for several decades, and studies shows that protein energy malnutrition affects the growth and development of children especially (0-5years). A well nourish child is one with access to adequate food supply, care and health, such a child will have weight and height measurements that compare very well with the standard normal distribution of height (H) and weight (W) of healthy children of the same age and sex. The best way to evaluate the nutritional status and overall health of a child is to compare the child's growth indices with the set cult off points in the standard normal distribution of well-nourished children that are associated with adequate growth and development.8–10 A healthy diet provides an adequate supply of all the nutrients that is necessary for best functioning of body cells;

i. Water as a transport medium of all chemical processes
ii. Protein for tissue repair, maintenance and growth
iii. Carbohydrate for energy given
iv. Fat for insulation, nerve conductivity and hormones structure
v. Vitamins and mineral for regulation on body physiological processes.

PEM Risk factors

Maternal factors:

- Formal education of mother
- Children of mothers with little or no formal education have an increased risk of developing protein energy malnutrition when compared with the children of the mothers who have a secondary education or higher
- Number of children under 5 years
- Mothers who have three or more children under 5 years have an increased risk of having a child with protein energy malnutrition when compared to mothers who only have one
- Young maternal age
- Occupation of the mother
- Marital status of the mother

Environmental and child factors:

- Area of residence: Rural vs urban dwelling
- Very low economic status of the family
- Unprotected source of water
- Use of firewood as only source of fuel
- Use of charcoal as main source of fuel
- Use of paraffin as main source of fuel
- Poor hygiene/cleanliness
- Poor health status of the child

The objectives of the study were:

1. To assess the knowledge of mother's under five year children regarding PEM.
2. To evaluate the effectiveness of structured teaching programme

regarding PEM for mothers of under 5 year children.

3. To prepare informative lesson plan regarding the PEM & its prevention for mother of under five year children in village.
4. To provide planned teaching programme for mothers of under five year children in village Simrol, Indore.

RESEARCH HYPOTHESIS:

H_1: There will be significant difference between pre-test and post test knowledge score of mother of under five year after the administration STP at the level of $p \leq 0.05$.

Methodology

The purpose of this study was to assess the knowledge, attitude, and practice regarding dietary practices in the prevention of malnutrition among mothers with under five children in Dolposh Odisha adopted area of Dr. Ambedkar Institute of Medical Science, District Sundargarh, Odisha state in preparation for Professor Prativa Roul's self instructional module in the year 2020-2021.

A study approach was adopted in this study using one group pre test post test design. The population of the study consisted of all mother's of selected area in simrol of Indore. Purposive sampling technique was used to select 30 mothers of under five children.

The study intended to measure the gain in knowledge score of mother's of under five year children after the administration of structured teaching regarding protein energy malnutrition causes and it's prevention. The group was assessed before and after introducing the intervention the key variable were knowledge of mother's of under five year children regarding protein energy malnutrition and structured teaching programme. A structure knowledge questionnaire was developed for data collection.3experts did the validation of the tool. Reliability of each tool was calculated using split half method.

Sample

In this study, a study approach was used with a one group pre-test post-test design. The study's population consisted of all mothers from a certain location of Indore's Simrol. The purposeful sampling strategy was utilized to pick 30 mothers with children under the age of five.

Data Collection

The actual data collecting took place between the 5th of June 2021 and the 5th of July 2021. The mean post-test knowledge score of 32.3 was higher than the mean pre-test knowledge score of 13.2. The study's analysis and findings revealed that training mothers with children under the age of five helped them increase their understanding and practice of PEM prevention.

Results

The mean score for knowledge is 14.29 (SD 5.57) and the mean score for attitude is 67.5 (SD 7.74). The knowledge and attitude test scores had a positive connection (r=0.63). Age ($\chi 2$=12.302), education ($\chi 2$=84.372), occupation ($\chi 2$=68.35), monthly income ($\chi 2$=39.25), religion ($\chi 2$=11.946), and source of health information ($\chi 2$=24.082) were all linked with knowledge of mothers with under five children. Other demographic characteristics, such as household type, number of children under the age of five, and food consumption, exhibited no relationship with awareness of dietary recommendations for malnutrition prevention.

Conclusion

By distributing self-instructional modules on dietary habits for malnutrition prevention, this aids in the acquisition of knowledge on malnutrition prevention. The study findings demonstrated that mothers had fairly appropriate knowledge, attitude, and practice regarding dietary habits for malnutrition prevention..Thus this study concluded that structured teaching programme is effective in increasing the knowledge of mother's of under five year children regarding protein energy malnutrition& its prevention. We observed that, if the age at delivery of child is increased, educational status of mother is improved, along with increase in socio economic status of mother, the knowledge of mothers in relation to PEM can be improved and prevalence of undernutrition and or malnutrition can be reduced

Findings

The findings of the study had implication in community health nursing, nursing practice, nursing education, nursing administration, and nursing research by helping to raise the awareness among mother's of under five year children 'health worker in the community to acquire knowledge on protein energy malnutrition. Knowledge of under-five mothers helps to identify Protein Energy malnutrition among under-five children earlier & it may reduce the occurrence of complications

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