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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PROTEIN ENERGY MALNUTRITION AMONG PARENTS HAVING UNDER FIVE CHILDREN

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ABSTRACT

Introduction: Children are the first call agenda of human resource development not only because younger children are the most vulnerable, but because the foundation for lifelong learning and human development is laid in these crucial early years. The aim of this study was to assess the effectiveness of structured teaching programme (STP) regarding Protein energy malnutrition among parents having under five children. ***Methodology****:* A quantitative approach and one group pre- test and post-test research approach were applied in the study. The study was conducted at malnutrition treatment centres of tertiary care hospital Jodhpur, after obtaining permission from concerned authorities. The sample consisted of parents of under five children meeting inclusion criteria and those willing to participate in study. A total of 60 parents of under five children were selected by purposive sampling technique. The levels of knowledge were divided in 3 categories according to obtained scores. The score below 40% was considered as inadequate knowledge. The scores between 40 – 79.99% and >80% were categorized as moderate knowledge and adequate knowledge respectively. ***Result****:* The findings revealed that post-test knowledge score was high as compare to pre-test knowledge score ($t= 65.618$, $p<0.001$) therefore STP was statistically effective in enhancing knowledge of the parents. Additionally, demographic variables of parents such as educational qualification and residential area associated with pre-test knowledge score. ***Conclusion****:* The study highlighted that parents have limited knowledge towards malnutrition and its prevention. The STP was effective upgrading the knowledge of parents of under five children about malnutrition and its prevention.

KEYWORD: Protein energy malnutrition, Parents, Under five children, Effectiveness, Structured Teaching Programme.

INTRODUCTION

Many common health problems can be prevented or the alleviated with a healthy diet. Nutrients are organic & inorganic complexes contained in food.[1] There are classes of nutrients those are mainly carbohydrates, fats, minerals, protein, vitamins and water.[2] These nutrient classes can be categorized as Nutrition is one of the cornerstones in maintaining health and preventing illness.[3] Nutrition is the sum of all the interaction between an organism and food it consumes. In other words, nutrition is what a person eats and how body use it. Nutrition is essential principle, which must be applied throughout the life cycle.[4] There is a stronger relation between micronutrients or macronutrients and health.[5] 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 energy.[6,7] Malnutrition is the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific function.[8]

Previous studies had shown that prevalence of Protein energy malnutrition (PEM) is high in India and lack of knowledge is one of the major causes of its occurrence. There is a need to conduct a research in this field so as to reduce the prevalence rate of PEM and help patients who are suffering to recover from present state by giving knowledge about PEM to their parents.[9] As the researcher was posted in different hospitals, she observed

that majority of children were having PEM especially under five children. Therefore, researcher felt that there is a need to conduct a study to improve the knowledge of parents regarding PEM**.**

METHODOLOGY

In the present study, quantitative approach and one group pre- test and post-test research design were adopted to assess the effectiveness of structured teaching programs on malnutrition and its prevention among parents of under five children. The study was conducted at malnutrition treatment centres of tertiary care hospital Jodhpur, after obtaining permission from concerned authorities. Through purposive sampling techniques, 60 parents of under five children were selected for present study. The tools selected for current study include sociodemographic scale and structured interview schedule. The questionnaire has 24 multiple-choice questions towards PEM. The levels of knowledge were divided in 3 groups according to obtained scores. The score below 40% was considered as inadequate knowledge. The scores between 40 – 79.99% and > 80% were categorized as moderate knowledge and adequate knowledge respectively. Prior to tool administration all subjects were given an information sheet, explaining the purpose and outcome of study. Informed consent was taken from participants and self explanatory tools were administered to participants. Permission for study was taken from concerned authorities. The data collected from participants was analysed using SPSS software 21 version**.**

RESULT

As per table-1, among relation of parents with admitted child, 33(55%) were mother and 27(45%) were father. Age group of parents were in between below 20 to 30 & above it, in that majority 27(45%) of parents were between 26-30 years, 25(41.7%) of parents were fallen in the age group of 21-25 years, 5(8.3%) were belonged to age of 30 & above it and least 3(5%) were below20. All the parents had poor education, in that majority 21(35%) of parents were having primary education, and least 2 (3.3%) were educated up to senior secondary. Nearly half of the parents 29(48.3%) were unemployed, 21(35%) were belonged to labour class, 10(16.7%) had private job and no one had government job. Regarding residential area study revealed that more than half of the parents 35(58.3%) were from rural area and remaining 25(41.7%) were from urban area. Related to monthly family income majority of the parents 37(61.7%) had monthly family income below 10,000, followed by 14 (23.3%) of sample had income of 10,001 – 20,000, one tenth of the parents 6(10.0%) had income between 20,001-30,000 and only 3 (5.0%) of parents had income of 30,001 & above it. It is clear that majority of families had poor income. Majority 26(43.3%) parents had 2 children, 15(25%) parents had 3 children, 14(23.3%) parents had only 1 child and only few 5(8.3%) parents had more than 3 children. In regard to dietary pattern most of the parents 40 (66.7%) were vegetarian followed by 16(26.7%) were occasionally non-vegetarian and 3(5%) were non- vegetarian and only 1(1.7%) was eggetarian. In last, type of family the majority of them 34(56.7%) were belonged to joint family followed by 15(25.0%) were belonged to nuclear family, 9(15%) were belonged to extended family and only 2(3.3%) were single parent.

Additionally in table-2, 100% parents have inadequate knowledge in pretest whereas in the post-test majority of sample 81.7% gained adequate knowledge and 18.3% of the sample had moderate knowledge (figure-1). The mean post-test knowledge score obtained by subjects (24.22±1.585) was higher than the mean pre-test knowledge score (3.27±2.261). Paired 't' test was applied to find out the difference between mean pre-test and post-test knowledge score and it was statistically highly significant (t= 65.618, p<0.001) which prove the effectiveness of STP (Table-3). Results showed in table-4 revealed that demographic variables like educational qualification (F= 11.390), Educational qualification and residential area were associated with pre-test knowledge score with children (F= 3.029) Residential area should excluded from insignificant association because it is significantly associated. Whereas insignificant association was found with socio-demographic variables such as relation with admitted child (F=1.292), age of parent (F=1.348), age of admitted child (F=1.130), occupation (F=0.048), residential area (F=3.400), monthly family income (F=1.753), number of children (F= 3.029), dietary pattern (F=1.419) and with their type of family (F= 2.408).

Table 1: Frequency and percentage distribution of socio-demographic characteristic of the samples.

N=60

Socio-Demographic Characteristic	Frequency (n)	Percentage (%)
Relation with admitted child		
Mother	33	55.0%
Father	27	45.0%
Age (in years)		
Below 20	3	5.0%
20-25	25	41.7%
26-30	27	45.0%

31 & above	5	8.3%
Educational Qualification		
Informal education	14	23.3%
Primary education	21	35.0%
Up to secondary education	20	33.3%
Up to senior secondary	2	3.3%
Graduation and above	3	5.0%
Occupation		
Labour class	21	35.0%
Private job	10	16.7%
Government job	0	0.0%
Unemployed	29	48.3%
Residential area		
Rural	35	58.3%
Urban	25	41.7%
Nomadic Settlements	0	0.0%
Monthly Family Income (in Rupees**)**		
Up to 10,000	37	61.7%
10,001-20,000	14	23.3%
20,001-30,000	6	10.0%
30,001 & above	3	5.0%
Number of children's		
1	14	23.3%
2	26	43.3%
3	15	25.0%
>3	5	8.3%
Dietary pattern		
Vegetarian	40	66.7%
Eggetarian	1	1.7%
Occasionally non-vegetarian	16	26.7%
Non-vegetarian	3	5.0%
Type of family		
Nuclear family	15	25.0%
Joint family	34	56.7%
Extended family	9	15.0%
Single parent	2	3.3%

Table No. 2: Comparison of pre-test and post-test on level of knowledge regarding Protein Energy Malnutrition. (N=60)

Level of Knowledge	Pre-test	Post-test	x^2 *Value*	*df*	*P value*
Inadequate	60	00			
Moderate Adequate	00	11	120.0	2	**<0.001***
Adequate	00	49			

*** Significant at p ≤ 0.05**

Table No. 3: Comparison of pre-test and post-test knowledge score regarding Protein Energy Malnutrition. (N=60)

Aspects	Max Score	Pre-test Mean ± SD	Post-test Mean ± SD	Knowledge gain Mean ± SD	Paired t-value	P value
Definition & General information	5	0.03 ± 0.181	3.82 ± 0.725	3.78 ± 0.739	39.679	<0.001*
Incidence and Etiology	7	1.40 ± 0.995	5.57 ± 0.745	4.17 ± 1.264	25.525	<0.001*
Sign and Symptoms	4	0.00 ± 0.000	2.85 ± 0.880	2.85 ± 0.880	25.097	<0.001*
Prevention	5	1.12 ± 1.091	4.78 ± 0.490	3.67 ± 1.188	23.898	<0.001*
Management	6	0.70 ± 0.788	4.90 ± 0.630	4.20 ± 0.971	33.513	<0.001*
Management of Complication	3	0.02 ± 0.129	2.30 ± 0.497	2.28 ± 0.524	33.770	<0.001*

Over all	30	3.27 ± 2.261	24.22 ± 1.585	20.95 ± 2.473	65.618	<0.001*

Table No. 4: Association between Pre-test knowledge score regarding Protein Energy Malnutrition and socio-demographic characteristic.

(N=60)

Socio-Demographic Characteristic	Pre-test Mean ± SD	F/t	P value
Relation with admitted child			
Mother Father	3.61 ±2.45 2.85 ±1.97	1.292	0.201
Age (in years)			
Below 20	2.00 ± 1.00	1.348	0.268
20-25	3.80 ± 1.83		
26-30	3.15 ± 2.64		
31 & above	2.00 ± 2.12		
Educational qualification			
Informal education	1.21 ± 1.58	11.390	**<0.001***
Primary education	3.05 ± 1.69		
Up to secondary education	4.15 ± 1.76		
Up to senior secondary	4.50 ± 3.54		
Graduation and above	7.67 ± 1.53		
Occupation			
Labour	3.19 ± 1.89	0.048	0.986
Private job	3.10 ± 2.42		
Government job	0.00 ± 0.00		
Unemployed	3.38 ± 2.51		
Residential area			
Rural	3.89 ± 2.22	3.400	**0.011***
Urban	2.40 ± 2.06		
Nomadic Settlements	0.00 ± 0.00		
Monthly Family Income (in Rupees) Up to 10,000	2.89 ± 2.18	1.753	0.167
10,001-20,000	4.07 ± 2.13		
Number of children's 20,001-30,000 30,0001 & above	 4.33 ±2.94 2.00 ±1.00		
1	4.14 ± 1.99	3.029	**0.037***
2	3.38 ± 2.17		
3 >3	3.07 ±2.46 0.80 ±1.10		
Dietary pattern Vegetarian	 3.50 ± 2.24	1.419	0.247
Eggetarian Occasionally non-vegetarian Non-vegetarian	5.00 ±0.00 2.38 ±2.31 4.33 ±1.53		
Type of family			
Nuclear Joint family Extended Single parent	3.60 ±2.35 2.68 ±1.95 4.56 ±2.79 5.00 ±1.41	2.408	0.077
*** Significant at p ≤ 0.05**			

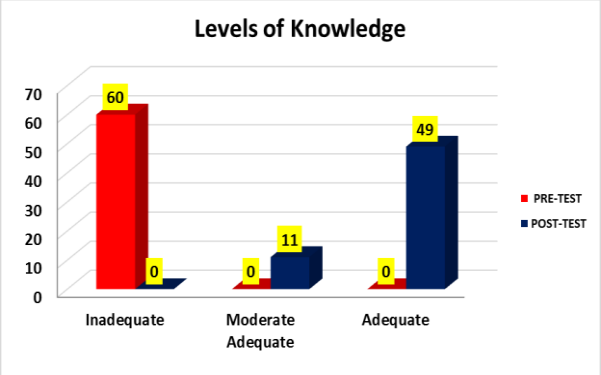

Figure 1: Levels of knowledge in pre test and post test among the subjects.

DISCUSSION

The discussion of the findings is much more subjective section of a research report than presentation of findings. The discussion of findings section of a study allows the researcher to make interpretation of the findings. During pre-test, parents were not having adequate even moderate level of knowledge scores regarding PEM. All samples (100%) were having inadequate level of knowledge in pre-test while after the administration of the STP, there was marked improvement in the level of knowledge among the parents. The majority of parents 49(81.7%) gained adequate knowledge followed by 11(18.3%) of the samples have moderate knowledge regarding PEM. This finding similar to another study conducted by Pratiksha P et al 2019 at Churu Rajasthan to assess effectiveness of structured teaching programme on knowledge of parents of under five year children regarding PEM and its Prevention. The study highlighted that structured teaching programme was effective in increasing the knowledge of parents of under five year children regarding PEM and its Prevention.[10]

Furthermore, Chetan SP (2018) communicated that majority of the parents 41% had satisfactory knowledge level, inadequate knowledge about 36% and 23% were had adequate knowledge. This finding was in contrast with our findings.[11] In another study, Sangra S. and Nowreen N conducted a cross-sectional community-based study among 300 mothers with under-five children. The findings revealed that the majority of mothers had fair to good KAP regarding nutrition of under-five children and prevention of malnutrition.[12] Furthermore, Reiher A and Mohammadnezhad M. highlighted that about (71%) of the mothers did not know about the nutritional suppliants.[13] Additionally, various studies have highlighted that STP was significantly effective in enhancing the knowledge of participants. It was in support of our findings.[14-15] Regarding association of pre-test score with demographic variables such as educational qualification, residential area and number of children was significant associated. Whereas this finding contrast with another study that show that the association between knowledge score and Education, No. of children, Residential Area.[16] The present study showed that there was no statistically significant association found between the knowledge scores among parents of under five children regarding protein energy malnutrition and the demographic variables such age of parent, age of admitted child, occupation, monthly family income, dietary pattern and with their type of family. This finding supported by a study conducted at SGT University Haryana presented that age, religion, type of family, income, occupation, number of under five children in family, immunization status of children and source of health information were found non-significant at 0.05 level of significance.[17] The study had shown a positive impact of STP on knowledge of parents regarding PEM.

CONCLUSION

The present study revealed that the knowledge scores of parents were very low before administration of STP. The intervention facilitated them to improve their knowledge about PEM which was evident from the post-test knowledge scores. Hence STP was an effective strategy for providing information and to improve knowledge of parents which was well appreciated and accepted by parents. The hospital administration and stakeholders may adopt the intervention to improve knowledge of parents towards PEM. It will be effective in maintaining the proper growth and development of children which may decline the morbidity and mortality among children.

Limitations

The present study was conducted at single centre in western Rajasthan, India. The study was carried out on a population without randomization. The knowledge of parents was evaluated in terms of PEM.

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REFERENCE

1. Walter C. Willett, Jeffrey P. Koplan, Rachel Nugent, Courtenay Dusenbury, Pekka Puska, Thomas A. Gaziano. “Chapter 44. Prevention of Chronic Disease by Means of Diet and Lifestyle Changes.” *Disease Control Priorities in Developing Countries (2nd Edition)*. World Bank Publications, 2006, pp. 833–850. [Accessed on 5th June 2022]
2. Fletcher, Jenna. *What Are the 6 Essential Nutrients?* 2022. [Accessed on 12th June 2022]
3. Morris AL, Mohiuddin SS. Biochemistry, Nutrients. [Updated 2021 May 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554545/[Accessed on 7th June 2022]

4. Eilender, Elizabeth. *Nutrition Throughout the Lifecycle*. Momentum Press, 2016.
5. Chen Y, Michalak M, Agellon LB. Importance of Nutrients and Nutrient Metabolism on Human Health. Yale J Biol Med., Jun 28, 2018; 91(2): 95-103. PMID: 29955217; PMCID: PMC6020734.
6. Morris AL, Mohiuddin SS. Biochemistry, Nutrients. [Updated 2021 May 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554545/
7. Mondal, Puja. "What Are the Seven Major Classes of Nutrients? – Answered!" *Your Article Library*, 25 Sept. 2013, https://www.yourarticlelibrary.com/nutrients/what-are-the-seven-major-classes-of-nutrients-answered/9890.
8. *BrainKart*, https://www.brainkart.com/article/Malnutrition_33496/. [Accessed 10 June 2022].
9. Bhutia DT. Protein energy malnutrition in India: the plight of our under five children. J Family Med Prim Care, 2014; 3(1): 63-7.
10. Pratiksha Patrick. Effect of Structured Teaching Programme on the Knowledge of parentss under 5 years Children as a Regard of PEM. Asian J. Nursing Education and Research, 2019; 9(1): 113-116.
11. Chetan S P. A Descriptive Study to Assess the Knowledge of Parents Regarding the Nutrition for Under Five Children in Selected Areas of Bagalkot with a View to Develop a Self Instructional Module. JOJ Nurse Health Care, 2018; 7(3): 555713. DOI: 10.19080/JOJNHC.2018.07.555713
12. Sangra S, Nowreen N. Knowledge, attitude, and practice of parents regarding nutrition of under-five children: A cross-sectional study in rural settings. Int J Med Sci Public Health, 2019; 8(5): 392-394.
13. Reiher A, Mohammadnezhad M. Awareness and characteristics of the parents of malnourished children under 5 years old on south Tarawa, Kiribati in 2016: a descriptive study. MOJ Womens Health, 2017; 6(1): 332–336. DOI: 10.15406/mojwh.2017.06.00146
14. Harishankar Meena, Nirbhay Singh Choudhary, Dharmesh Chaturvedi. Effectiveness of Structured Teaching Program on Knowledge Regarding Malnutrition and its Prevention Among Mothers of Under Five Children. Int J Pediatr Nurs, 2020; 6(1): 71–76.
15. Pareek Shatrughan, Mehta Santosh, Goyal Harindarjeet. A structured teaching programme to assess the knowledge and practices of cancer patients regarding Radiotherapy induced skin reactions: A Quasi Experimental study. Int. J. Nur. Edu. and Research, 2017; 5(2): 198-202.
16. Thongam Kapeelta, Monika Chaudhary, Shifa Koshy, Harish Chopra. Knowledge regarding prevention of protein energy malnutrition among under five mothers in selected hospital in Meerut with a view to develop health education module. Int J Inno Res Mltidisciplinary field, 2017; 3(5): 1-6.
17. Sarika Yadav. Knowledge and Practices regarding Prevention of Protein Energy Malnutrition among Mothers of under Five Children. Asian J Nur Edu Research, 2016; 6(1): 96-100.