EFFECTIVENESS OF INFORMATION BOOKLET ON PROTEIN ENERGY MAL NUTRITION AMONG MOTHERS OF UNDER FIVE YEARS CHILDREN IN SELECTED RURAL COMMUNITIES NELLORE

Kalpana B., Indira A and Mary Vineela

Research Article

EFFECTIVENESS OF INFORMATION BOOKLET ON PROTEIN ENERGY MAL NUTRITION AMONG MOTHERS OF UNDER FIVE YEARS CHILDREN IN SELECTED RURAL COMMUNITIES NELLORE

Kalpana B[1]., Indira A[2] and Mary Vineela[3]

[1,2,3]Sree Narayana Nursing College, Nellore (Andhra Pradesh), India

ABSTRACT

1.To assess the Pre and post test level of knowledge on protein energy malnutrition among mothers of under five years children2.To determine the effectiveness Information booklet on Protein energy mal nutrition among mothers of under five years children
3. To associate Pre test scores of knowledge on protein energy malnutrition among mothers of under five years children with their selected socio demographic variables. **Methodology:** An Evaluative study by using pre experimental one group pre test and post test design was used, a sample size of 100 mothers were selected by using simple random Sampling technique, Semi structured questionnaire were used to assess the pre test level of knowledge among women on protein energy malnutrition and an information booklet was provided and post test level of knowledge was assessed. **Results:** – Paired 't' test value was 40.125at $p<0.05$. **Conclusion:-**The study revealed that mothers were improved their knowledge with information booklet.

INTRODUCTION

It is easy to build strong children than to repair broken men
-Frederick Douglass

Children are human resources of the future. A Child is precious to his parents, to his family, Community, Nation and to the World at large. Child growth is internationally recognized as an important public health indicator for monitoring nutritional status and health in populations. The mortality rate in India is as high as 11.2% of all deaths of under fives. The high mortality rate is largely due to infection and malnutrition. Hence malnutrition was shown to be an underlying cause in 3.4% of all deaths in all young children. High prevalence of malnutrition among young children is also due to lack of awareness and knowledge regarding their food requirements and absence of a responsible adult care giver. The young children needs love for growth but also adequate nutrition and health facilities, so that the children can grow up to complete at his optimum level.

Back ground of the study

According to the survey conducted in 2006 by Neetalal, among India's children 45.9% with whopping cough are under weight, 39 % are stunted, 20 % severely malnourished, 80% were anemic. More than 6,000 Indian children below five years die every day due to malnourishment or lack of basic micronutrients. India hosts 57 million or more than a third of the world's 146 million under nourished children. Karnataka has 44% of children below five years who are under weight and 37% who had stunted growth.

A cohort study on child's mortality was conducted by United States Agency for International Development. It revealed that in developing countries, children between 0-5 years of age form a large as well as 'high risk group`. India contributes to a large number and proportion of child death both due to higher under five mortality rate and large child population cohort in the country. The macronutrient deficiency is an ignored area as it is not a direct cause of child mortality. The study concluded that iron deficiency, protein deficiency, and fat deficiency are highly prevalent in the country among young children.

Shobha M.J. conducted an experimental study to evaluate the impact of information booklet for mothers on nutritional need of children below 5years of age at Mangalore. 50 mothers were selected by using random sampling technique. Structured questionnaire were used to collect the data. The findings revealed that the difference between pre test and post test knowledge scores were highly significant ('t'=49, $p<0.01$). The study revealed that mothers can improve their knowledge if self learning materials are provided to them.

Roy SK, Fuchs G J, Mahmud Z, Ara G, Islam S, Shafique S, *et al* conducted a study to determine effectiveness of

Corresponding author: ***Kalpana B***
Sree Narayana Nursing College, Nellore (Andhra Pradesh), India

intensive nutrition education with or without supplementary feeding on nutritional status of moderately malnourished children in Bangladesh. The study was conducted among 282 moderately malnourished children aged between 6 months to 24 months. Mothers of first intervention groups received intensive nutrition education two times a week for 3 months. And the second intervention group received the same nutritional education and their children received additional supplementary feeding. The researchers found that as the intensive nutrition education and supplementation given were highly effective on children improved from moderate malnutrition to mild and normal nutritional status.

Statement of the problem

A study to assess the effectiveness of information booklet on protein energy mal nutrition among mothers of under five years children in selected rural communities Nellore.

Objectives

1. To assess the Pre and post test level of knowledge on protein energy malnutrition among mothers of under five years children
2. To determine the effectiveness Information booklet on Protein energy mal nutrition among mothers of under five years children
3. To associate Pre test scores of knowledge on protein energy malnutrition among mothers of under five years children with their selected socio demographic variables

Research Hypotheses

H1: There will be statistically significant difference between pre and post test knowledge of mothers on Protein energy mal nutrition.

H2: There will be statistically significant improvement in post test level of knowledge among mothers on prevention protein energy malnutrition.

H3: There will be statistically significant association between pre test level of knowledge on prevention protein energy malnutrition with selected demographic variables

Projected outcomes

The study would help to improve knowledge on Protein energy mal nutrition among mothers of under five years children in selected rural communities, Nellore.

MATERIALS AND METHODS

An Evaluative study by using pre experimental one group pre test and post test design was used to conduct the study in selected rural areas Dakkilivaripalem, Thotapalli guduru, Kamakshinagar in Nellore District, Andhra pradesh. A sample size of 100 mothers were selected by using simple random Sampling technique. Permission was obtained from the research committee of Narayana Medical College. The informed consent was taken from the women who willing to participate in the study. Semi structured questionnaire were used to assess the pre test level of knowledge among women on protein energy malnutrition and an information booklet was provided and post test level of knowledge was assessed.

Criteria for selection of the sample

Inclusion criteria

The mothers who had child from 0 to 5 years.
The mothers who are willing to participate in the study

Exclusion criteria

The mothers who does not know Telugu or English.
The mothers who are not available at the time of data collection.

Tool for data collection

The tool consists of 3 parts

Part-1: Demographic variables of mothers like Age, Marital status, Education, Occupation, Family Income per Month, Religion, Number of Children, Type of Diet, Type of Family and Source of Information.

Part-2: Semi structured questionnaire to assess the level of knowledge among mothers of under five years children on Protein Energy Mal Nutrition consist of 39 items.

Part-3: Information booklet on Protein Energy Mal Nutrition

Data Analysis

Plan for Data Analysis

was done based on the objectives of the study by using Descriptive and Inferential Statistics.

Table 1

SlNo	Data Analysis	Method	Objectives
1	Descriptive statistics	• frequency and percentage distribution • Mean, Standard Deviation	• Distribution based of demographic variables • To assess the Pre and post test level of knowledge on Protein Energy Malnutrition among mothers of under five years children • To determine the effectiveness Information booklet on Protein Energy Mal Nutrition among mothers of under five years children
2	Inferential statistics	• Paired t-test • chi-square test	• To associate Pre test level of knowledge on Protein Energy Malnutrition among mothers of under five years children with their selected socio demographic variables

RESULTS

The presented data in Table 1 shows that among 100 mothers majority of the mothers 52(52%) belong to age group 20-25years, majority completed their primary education 72(72%), 86(86%) were got married and 14(14%) were separated. 76(76%) were House wives, 46(46%) mother's Family monthly income was < Rs 5000. Majority of mothers belong to Hinduism 62(62%), Out of 100 mothers 78(78%) belong to nuclear family. 48(48 %) heard about Protein energy mal nutrition from Anganwadi workers.

Table 1 Demographic characteristics of mothers by frequency and percentage   (N=100)

Sr. No	Demographic variables	Frequency	Percentage (%)
1	**Age of Mothers**		
a	20-25 Years	52	52
b	26-30 Years	31	31
c	31-35 Years	17	17
2	**Marital Status**		
a	Married	84	84
b	Separated	14	14
3	**Education**		
a	Primary Education	72	72
b	Secondary Education	19	19
c	Graduate and above	9	9
4	**Occupation status**		
a	Housewife	76	76
b	employee	14	14
c	Self employee	9	9
d	Professional	1	1
5	**Family income per month**		
a	Rs . <5000	46	46
b	Rs. 5001-7000	26	26
c	Rs. 7001-9000	14	14
d	Rs. >9000	14	14
6	**Religion**		
a	Hindu	62	62
b	Muslim	7	7
c	Christian	31	31
7	**Type of family**		
a	Nuclear	78	78
b	Joint	19	19
c	Extended	3	3
8	**Type of Diet**		
a	Vegetarian	15	15
b	Non Vegetarian	75	75
9	**Number of children**		
a	One	43	43
b	Two	52	52
c	Above Two	5	5
10	**Source of Information**		
a	Mass Media	6	6
b	Anganwadi	48	48
c	Health personal	24	24
d	Family and Relatives	22	22

Table 2 Frequency and percentage distribution of pre and post test level of knowledge among Mothers on Protein energy mal nutrition (N=100)

Knowledge Level	Knowledge Scores	Pretest		Post test	
		Frequency	Percentage	Frequency	Percentage
Inadequate	≤ 50 % Score	68	68.0	05	05
Moderate	51-75 % Score	32	32.0	36	36
Adequate	> 75 % Score	0	0.0	59	59
Total		**100**	**100**	**100**	**100**

Table 2. revealed that out of 100 mothers in pre test 68 (68%) mothers had inadequate knowledge regarding on Protein Energy Mal nutrition 32(32%) with moderately adequate knowledge where as in post test 59 (59%) mothers had adequate knowledge and 36(36%) with moderately adequate knowledge.

Table 3 Shows that the pre test and post test data analysis revealed that the mean post score (38.5)was higher than the mean pre test score (13.64). Paired 't' test value was 40.125at $p<0.05$. The study revealed that mothers were improved their knowledge with information booklet.
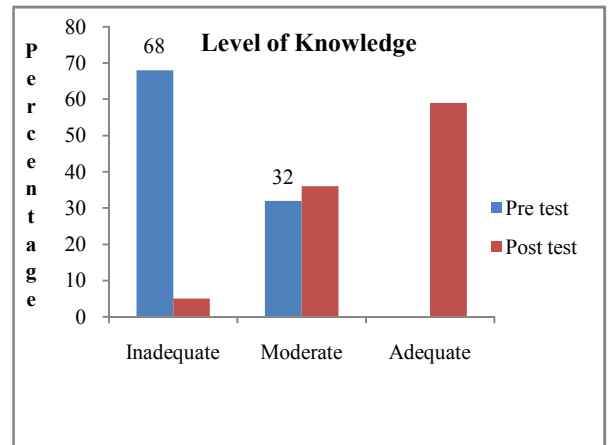

Figure 1 Frequency and percentage distribution of pre and post test level of knowledge among Mother on Protein energy mal nutrition (N=100)

Table-3 Comparison of mean and standard deviation with paired t test in pre and post test knowledge on protein energy malnutrition among women Instead of women (mothers) N=100

		Mean	Standard deviation	Paired 't' test
1	Pre test	13.64	3.07	40.125
2	Post test	38.5	4.34	Table value 2.00 d.f. 59 Significant at p<0.05 level

There was a statistically significant association between pre test level of knowledge and demographic variables of mothers such as age, educational status, number of children, monthly income and type of family and there was no statistically significant association with marital status, Occupation, Type of diet, religion and source of health information at 0.05 level.

Implication of the study

- The findings of the study indicated that more emphasis should be placed in the nursing curriculum about control and prevention of Protein-Energy Malnutrition.
- Health education program can be used to reinforce learning needs of the mothers on Protein-Energy Malnutrition.
- Students can be motivated to teach the mothers about the control and prevention of Protein-Energy Malnutrition in the wards and community settings.
- Varied type of audio-visual aids regarding Protein-Energy Malnutrition should be prepared for teaching purpose.
- In-service and continuing education programs may be conducted for the staff to enhance the knowledge on Protein-Energy Malnutrition

Recommendations of the study

On the basis of the finding of the study following recommendations have been made:

An experimental study can be conducted with control group for the effective comparison.

A similar study can be replicated on large sample to generalize the findings

A similar comparative study can be conducted between rural and urban settings.

A similar study can be conducted by using other educational methods like demonstration, role play etc.

A similar study can be conducted by including attitude.

CONCLUSION

Based on the result of the study shows that the total pre test mean knowledge score of the mothers was 13.64, with Standard deviation 3.07 which indicates that the mothers had inadequate knowledge on protein energy malnutrition. In the post test the mean knowledge score of the mothers was 38.5 with standard deviation 4.34 in which there is a significant difference of 24.86 which is a net benefit to the mothers due to the effectiveness of informational booklet. There was informational booklet was effective to improve mother's knowledge on Protein energy mal nutrition.

References

1. Lahariya C, Kotecha. Macronutrient Supplementation and child survival in India. Indian J Pediatr 2010 Apr; 77(4); p.19-24.
2. DE Lauture H.*et.al* "a model of combating malnutrition in children: nutritional rehabilitation centers" 1982; 1(2} p.18-21.
3. Mull.D.S. Traditional perception of marasmus in Pakistan.
4. Shobha M.J. A study to evaluate the effectiveness of information booklet for mothers on nutritional deficiency of children below 5 years of age. (Unpublished master dissertation). University of Mangalore. 1997.
5. Singh MB, Fotedar R, Lakshminarayana J, Anand PK. Studies on the nutritional status of children aged 0-5yrs in drought-affected desert area. Public health nutrition 2006 Dec; 9(8):961-7.
6. Park K. Park's Text book of Preventive and Social Medicine. 20th edition. Jabalpur: Banarsidas Bhanot Publishers; 2009. p.472, 800,552
7. http//www.grida.no/publications/rr/food crisis p: 3562
8. Swaminathan. M Advanced textbook on Food and Nutrition. Vol II the Bangalore printing and publishing; 2006.p 317
9. Gupta S. Pediatrics. 3rd edition. Published by V.S Johr for New age international limited;. 1-2,83.

****