A Study To Assess The Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention And Management of Protein Energy Malnutrition Among Mother's of Under Five Children Attending Selected Anganwadi Centres of Bikaner City

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Abstract- *A study to assess the effectiveness of structured teaching programme on knowledge regarding prevention and management of protein energy malnutrition among mother's of under five children attending selected Anganwadi centres of Bikaner city. The research design used was one group pretest posttest pre-experimental research design. Purposive sampling was used for sampling method. The sample of the study constitute of 60 mothers of underfive children visiting selected Anganbadi centres at Bikaner city. Structured questionnaire was prepared for assessing the effect of structured teaching programme on knowledge regarding PEM among mothers of under five childrens.*

In pretest, majority of 63.33% of the mothers have inadequate knowledge, 33.33 % mothers have moderate knowledge and 3.33% mothers have adequate knowledge before STP regarding protein energy malnutrition.

In posttest, 3.33% of the mothers have inadequate knowledge, 25 % mothers have moderate knowledge and 71.66% mothers have adequate knowledge after STP regarding protein energy malnutrition. This indicates that there is marked improvement in knowledge score of mothers regarding PEM after structured teaching programme.

Keywords- structured teaching programme on knowledge regarding prevention and management of protein energy malnutrition among mother's of under five children attending selected Anganwadi centres

I. INTRODUCTION

"Children's growth rate reflects accurately the state of a nation's public health and average nutritional status of its citizens". **- Eveleth.P.G and J.M.Tanner, 1976**

Nutrition is an input to and foundation for health and development. Better nutrition means stronger immune system, less illness and better health. Healthy children learn better. Healthy people are stronger, are more productive and are more able to create opportunities to gradually break the cycles of poverty and hunger in a sustainable way. Better nutrition is a prime entry point to ending poverty and a milestone for achieving better quality of life.

Malnutrition means "badly nourished" but it is more than a measure of what we eat or fail to eat. Nutritional status is the result of the complex interaction between the food we eat, our overall state of health, and the environment in which we live- in short, food, health and caring, the three "pillars of well-being". Child malnutrition is the biggest challenge our country is facing today, even when the economy is said to be surging ahead. Every second child under three in the country is malnourished.

A recent estimate by the Food and Agricultural Organization (FAO) puts the number of malnourished children in India at around 200 million, almost half of the world's total.[2] Imbalanced between a child's protein energy requirement and his or her dietary protein and calorie supply was the source of protein energy malnutrition. Which compounded the problems of any underlying diseases .It is recommended that catch-up growth may be achieved by using appropriate nutritional support .

A study done report that malnutrition, with it constituents of protein-energy malnutrition and micronutrient deficiencies, continued to be a major health burden in developing countries. It was globally the most important risk factor for illness and death, with hundreds of millions of pregnant women and young children particularly affected. High prevalence of poor diet and infectious diseases regularly united into a vicious circle. Although treatment protocols for severe malnutrition have become more efficient, most patients (especially in rural areas) have little or no access to formal health services and were never seen in such settings. To be effective, all such intervention required accompanying nutrition – education campaigns and health interventions to achieve the hunger and malnutrition – related Millennium Development Goals.

A study done reported that the nutritional status of slum children was worst amongst all urban groups and was even poorer than the rural average. Most common causes of malnutrition included faulty infant feeding practices, impaired utilization of nutrients due to infections and parasites, inadequate food and health security, poor environmental conditions and lack of proper child care practices.

According to WHO, protein energy malnutrition affects every fourth child world wide. One hundred and fifty million (26.7%) are underweight while 182 million (32.5%) are stunted. Geographically more than 70% of PEM children live in Asia, 26% in Africa and 4% Latin America and the Caribbean. Their plight may well have begun even before birth with a malnourished mother.

II. MATERIALS AND METHODS

Research methodology is a way to systematically solve the research problem. The purpose of this section is to communicate to the readers what the investigator did to solve the research problem or to answer research questions.

The present study aims to assessing the effectiveness of structured teaching programme on knowledge regarding prevention and management of protein energy malnutrition among the mothers of underfive children visiting selected Anganwadi centres at Bikaner City.

2.1 Research design

In present study pre experimental one group pre-test post-test design was adopted for the study. The research design of a study spells out the basic strategies that the researchers adopt to develop information that is accurate and interpretable evidence. In this study the intervention (structured teaching programme) depicted as X. one group of mothers of underfive children were selected. In the present study, the base measure is knowledge regarding prevention and management of protein energy malnutrition. The research design used in this study is pre-test post-test one group design.

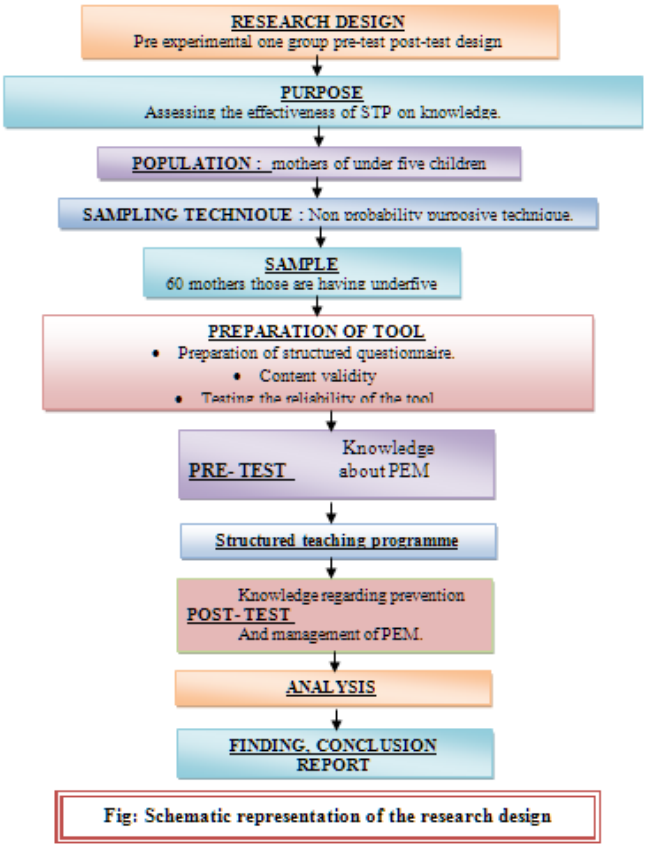


Fig: Schematic representation of the research design

2.2 Research setting

Setting may be natural setting or laboratory setting depending upon study topic and researcher choice (Polit and Hungler 1996)

The study was conducted in a selected Anganwadi centres at Bikaner City.

2.3 sample size and sampling technique:

The sample size of the present study comprised of 60 mothers of underfive children.

In this study, Non probability sampling technique **purposive sampling** was adopted to select the subjects.

2.4 SAMPLING CRITERIA

The following criteria are set to select the samples:

Inclusion criteria:

The sample was selected within the following predetermined criteria:-

Mothers of under five children

- who are coming to selected Anganawadi Center.
- who are willing to participate in the study.
- who can read and write or understand hindi.
- who are available during data collection..

Exclusion Criteria:

The samples are excluded those having the following criteria Mothers of under five children

- who are not coming under selected Anganawadi Centre.
- who are not willing to participate in the study.
- Who cannot read and write or understand hindi.
- Who are not available during data collection period.

2.5 VARIABLES OF THE STUDY

A variable is an attribute of person or object that varies that is taken on different value.

Three types of variables are used in this study. They are

1. Demographic variable
2. Dependent Variable
3. Independent Variable

1. Demographic variable:

(Characteristics- age, education, family income, family type, no. of children sources of information, Occupation).

2. Independent variable:

The variable that is believed to cause or influence the dependent variable. The independent variable in this study is Structured Teaching Programme.

3. Dependent variable:

The outcome variable of interest, the variable that is hypothesized to depend on or be caused by another variable is the dependent variable.

In the present study it refers the level of knowledge regarding prevention and management of PEM among mothers of underfive children.

2.6 POPULATION

Population refers to the entire aggregate of individuals or objects having common characteristics. In this present study population consists the mothers those are having children of under five age visiting selected Anganwadi centres.

2.7 Description of the tool

The researcher prepared a modified structured questionnaire as a tool for this study.
A modified structured questionnaire includes two sections:

SECTION I: This section involves items searching the information on demographic profile of a sample such as age, education, family income, family type,no. of children, religion, source of information, occupation.. It consists of total 8 items.

Section II: Deals with modified Structured questionnaire total 25 questions to assess the knowledge regarding PEM among mothers of underfive children:

Maximum score – 25

GRADE	SCORE
POOR	0-8
AVERAGE	9-16
GOOD	17-25

Section III: Deals with structured teaching programme.

Researcher developed a structured teaching programme of 45 minutes regarding the protein energy malnutrition.

This is a teaching programme which exist by the help of flash cards, charts, images etc.

III. RESULT AND DISCUSSION

The data has been analyzed and interpreted in the light of objectives and hypothesis of the study. The data was obtained from 60 Mothers of underfive children who completed the 3 major phases of the study.

1. Pre test phase

2. Structured teaching program phase
3. Post test phase

The data was analysed based on the objective of the study by using descriptive and inferential statistics Analysis and interpretation of the data was done based on objectives of the study.

1. To assess the existing knowledge of mothers of underfive children regarding prevention and management of protein energy malnutrition in means of pre test.
2. To assess the post test knowledge of mothers of under five children regarding prevention and management of Protein Energy Malnutrition.
3. To evaluate the effectiveness of structured teaching programme on the knowledge regarding prevention and management of protein energy malnutrition among mothers of underfive children.
4. To associate the level of knowledge of mothers with selected demographic Variables.

Organisation of study finding

The data was analysed and presented under following section:-

Section I - Description of Demographic Variables.
Section II - Analysis of knowledge of mothers of underfive children(PRE TEST).
Section III- Analysis of knowledge of mothers of under five children(POST TEST).
Section IV – Analysis of the structured teaching programme on the knowledge.
Section V - Correlation of the level of knowledge of mothers with selected demographic
Variables.

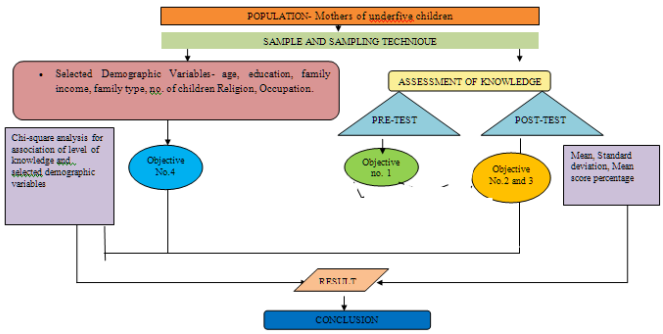


FIG- SCHEMATIC DIAGRAMS OF RESEARCH ANALYSIS

SECTION I

This section deals with the selected demographic variables such as age, educational status, family income, no, of children ,Religion, type of family, occupation of selected sample under study.

Table 1: Description of samples according to Demographic characteristics by frequency and percentage.
N=60

Sr no.	VARIABLE	FREQUENCY	PERCENTAGE
1	**AGE**		
	Less then 20 years	10	16.66
	20-30 years	30	50
	Above 30 years	20	33.33
2	**EDUCATION STATUS**		
	Illiterate	10	16.66
	Primary	20	33.33
	Secondary	20	33.33
	Higher secondary	10	16.66
	Graduate and above	0	0
3	**FAMILY INCOME**		
	up to Rs. 2000	0	0
	Rs.2001-5000	10	16.66
	Rs.5001-10000	30	50
	Rs.10001 & above	20	33.33
4	**NUMBER OF CHILDREN**		
	One	10	16.66
	Two	30	50
	Three	18	30
	More than three	2	3.33
5	**RELIGION**		
	Hindu	32	53.33
	Muslim	18	30
	Christian	10	16.66
	Any other	0	0
6	**TYPE OF FAMILY**		
	Joint	22	36.66
	Nuclear	38	63.33
7	**OCCUPATION**		
	House wife	50	83.33
	Private job	3	5
	Govt. job	0	0
	Business woman	7	11.66

The above table no.1 shows that 16.66% of the mothers were from age group less than 20 years and 50% of them were from age group 20-30 years and 33.33% were from age of above 30 years.

About educational status 16.66% of them illiterate, 33.33% were primary educational status, 33.33 were from secondary education and 16.66% were from higher secondary education.

About family income 0% of mothers have below 2000 income, 16.66% were have 2001-5000 monthly income, 50% of mothers have 5001 to 10000 income and 33.33% mothers have income of above 10001.

About numbers of children 16.66% mothers having one children, 50% mothers having two children, 30% having three children, and 3.33% have more than three children.

About religion 53.33% mothers were from hindu religion, 30% mothers were from muslim religion and 16.66% mothers were from Christian religion.

About type of family 36.66% mothers were from joint family and 63.33% mothers were from nuclear family.About occupation 83.33% mothers were housewife, 5% mothers were doing private job and 11.66% are doing business.

SECTION II

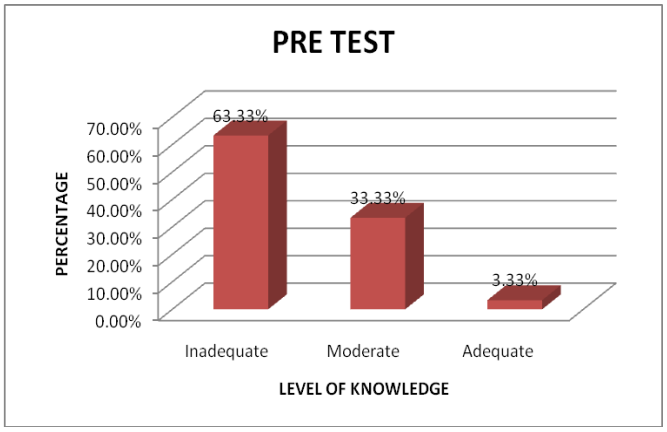
Analysis of knowledge of mothers of underfive children in means of pretest.

Table – 2(A)frequency and percentage distribution of knowledge before STP

N=60

S.No.	Level of Knowledge	(f)	%
1.	Inadequate (< 32%)	38	63.33%
2.	Moderate (33-67%)	20	33.33%
3.	Adequate (> 68%)	02	3.33%

N=60



Graph: 1(a) pre-test knowledge of Mothers regarding PEM.

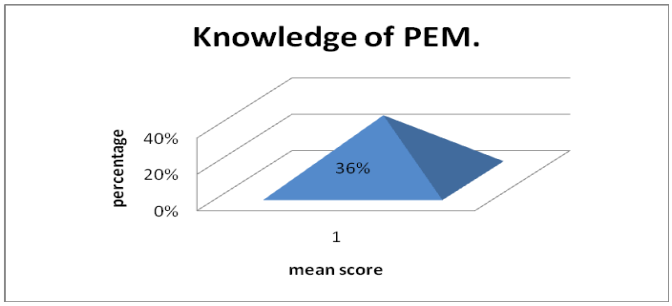
From the above table 2.1 & figure 2(a), the bar diagram represents the pre-test knowledge of mothers regarding PEM who have participate in the study. 63.33% of the mothers have inadequate knowledge, 33.33 % mothers have moderate knowledge and 3.33% mothers have adequate knowledge before STP regarding protein energy malnutrition.

Table –2(B): Mean, S.D., Range, Mean score percentage of Knowledge score before STP.

N = 60

Sl. No.	Practice	Max possible score	Mean	SD	Range	Mean Score %
1.	Knowledge on PEM.	25	09	3.51	0-20 = 20	36%

N=60



Graph: 1(b) mothers Mean score of knowledge regarding PEM

The above graph shows summary of statistical outcomes of mothers knowledge of mean score regarding PEM . Overall maximum knowledge Score of mothers was 25. The mean score was 09, with standard deviation 3.51 and range from 0-20=20. The mean score percentage was computed and it was found to be 36%.

From the above results it was found that the sampled subjects were having moderate knowledge regarding PEM.

SECTION III

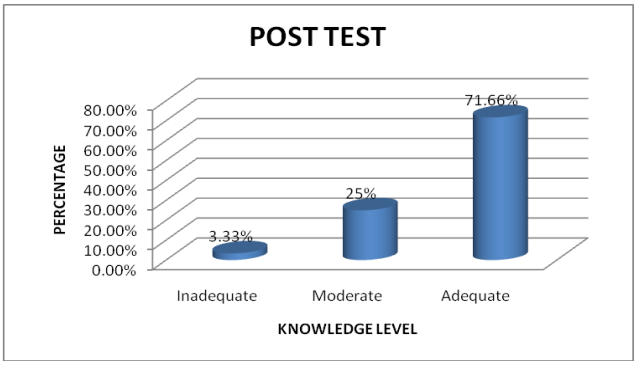
Analysis of knowledge of mothers of underfive children in means of postest.

Table – 3(A)frequency and percentage distribution of knowledge after STP

N=60

S.No.	Level of Knowledge	(f)	%
1	Inadequate (< 32%)	02	3.33%
2	Moderate (33-67%)	15	25%
3	Adequate (> 68%)	43	71.66%

N=60



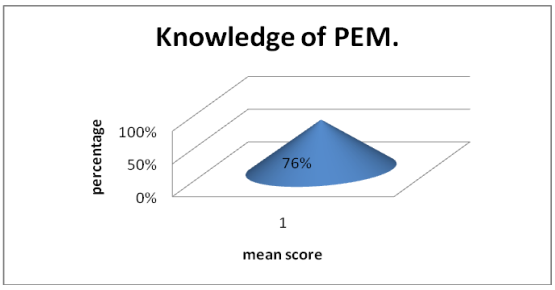
Graph: 2(a) post-test knowledge of mothersregarding PEM.

From the above table 3(a) & figure 3(a), the bar diagram represents the pos-test knowledge of mothers regarding PEM who have participate in the study. 3.33% of the mothers have inadequate knowledge, 25 % mothers have moderate knowledge and 71.66% mothers have adequate knowledge after STP regarding protein energy malnutrition.

Table –3(B): Mean, S.D., Range, Mean score percentage of Knowledge score after STP. N = 60

Sl. No.	Practice	Max possible score	Mean	SD	Range	Mean Score %
1.	Knowledge on PEM.	25	19	6.56	09-24= 15	76%

N=60



Graph: 2(b) mothers Mean score of knowledge regarding PEM(post test)

The above graph shows summary of statistical outcomes of mothers knowledge of mean score regarding PEM . Overall maximum knowledge Score of mothers was 25. The mean score was 19, with standard deviation 6.56 and range from 09-24=15. The mean score percentage was computed and it was found to be 76%.

From the above results it was found that the sampled subjects were having adequate knowledge regarding PEM.

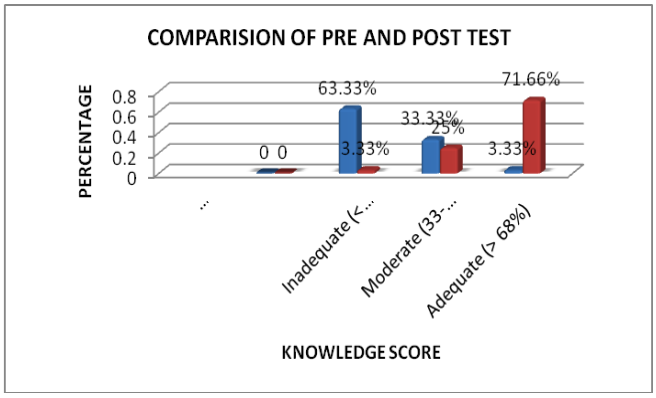
SECTION IV

Analysis of effectiveness of structured teaching programme on knowledge.

Table – 4: Comparison between pre and post-test knowledge of mothers regarding PEM

N=60

Level of knowledge	Pre test		Post test	
	(f)	%	(f)	%
Inadequate (<32%)	38	63.33%	02	3.33%
Moderate (33-67%)	20	33.33%	15	25%
Adequate (> 68%)	02	3.33%	43	71.66%



Graph: 3 Graph showing Comparison between pre and post-test knowledge of mothers regarding PEM

In above table and graph showing the comparision of knowledge score in pre and post test. This concluded that the structured teaching programme is effective in improving the knowledge regarding the prevention and management of PEM among the mothers of underfive children.

SECTION V
ANALYSIS TO FIND OUT CORRELATION BETWEEN KNOWLEDGE LEVEL OF PEM AND SELECTED DEMOGRAPHIC VARIABLES

The correlation between knowledge and demographic variables was assessed using Fisher's exact test. The results summary of Fisher's exact test are tabulated below:

Table 5: Association of pre-test knowledge score with selected demographic variables among Mothers.

Sr. no.	Variable	Knowledge score			p-value
		Inadequate	Moderate	Adequate	
1	AGE				
	Less than 20 years	02	05	03	0.112
	20-30 years	10	15	5	
	Above 30 years	10	5	02	
2	EDUCATION STATUS				0.789
	Illiterate	08	02	00	
	Primary	14	05	01	
	Secondary	06	12	02	
	Higher secondary	01	08	01	
	Graduate and above	0	0	0	
3	FAMILY INCOME				0.112
	upto Rs. 2000	0	0	0	
	Rs.2001-5000	04	05	01	
	Rs.5001-10000	03	20	07	
	Rs.10001 & above	13	05	02	
4	NUMBER OF CHILDREN				0.196
	One	03	05	02	
	Two	13	15	02	
	Three	08	05	05	
	More than three	2	0	0	
5	RELIGION				1.00
	Hindu	2	20	10	
	Muslim	8	5	5	
	Christian	03	05	02	
	Any other	0	0	0	
6	TYPE OF FAMILY				0.198
	Joint	10	09	03	
	Nuclear	13	20	05	
7	OCCUPATION				0.112
	House wife	20	20	10	
	Private job	0	3	0	
	Govt. job	0	0	0	
	Business woman	04	02	01	

The above table 3 presents the results of association between the knowledge score and selected demographic variable. Here the significance is on 0.05.

So none of the demographic variable are significant. So the null hypothesis is rejected.($p<0.05$)

Hense the result concluded that the structured teaching programme is significant and effective in improving the knowledge regarding prevention and management regarding protein energy malnutrition among the mothers of under five children.

IV. CONCLUSION

On the basis of the findings of the study *"*A study to assess the effectiveness of Structured teaching programme on knowledge regarding prevention and management of PEM among the mothers of underfive children visiting selected Anganbadi centres at Bikaner city." the below said conclusions were drawn. It brings out the limitation of the study in to picture. The implications are given on various aspects like Nursing practice, Nursing Education, Nursing Administration, and Nursing Research and also gives an insight to further studies.The main aim of the study was to assess the effect of structured teaching programme on knowledge regarding PEM.

In pretest, majority of 63.33% of the mothers have inadequate knowledge, 33.33 % mothers have moderate knowledge and 3.33% mothers have adequate knowledge before STP regarding protein energy malnutrition.

In posttest, 3.33% of the mothers have inadequate knowledge, 25 % mothers have moderate knowledge and 71.66% mothers have adequate knowledge after STP regarding protein energy malnutrition. This indicates that there is marked improvement in knowledge score of mothers regarding PEM after structured teaching programme. the structured teaching programme is proved to be effective in improving knowledge regarding PEM among mothers of underfive children.

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