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Impact of Instructional Programme on Knowledge Regarding Protein Energy Malnutrition among the Mothers of Preschool Children from Selected Rural Areas of Karnataka: Pretest

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Abstract: Background of the study: According to World Health organization (WHO), protein energy malnutrition refers to "an imbalance between the supply of protein and energy and the body's demand for them to ensure optimal growth and function"[1]. It is a major public health problem in India. It affects particularly the preschool children (< 6 years) with its direct consequences ranging from physical to cognitive growth and susceptibility to infection. This affects the child at the most crucial period of time of development which can lead to permanent impairment in later life[2]. According to WHO, globally 162 million under-fives were stunted among them 56% lived in Asia and 36% in Africa, 99 million under-fives were underweight among them 67% lived in Asia and 29% in Africa.50 million under five children were wasted and 17 million were severely wasted[3]. Approximately 71% of them lived in Asia and 28% in Africa, with similar figures for wasted children 69% and 28% respectively. Children who suffer from wasting face a markedly increased chance of death[4]. According to United Nations International children's Emergency Funds (UNICEF), 13% of children under five years old in the developing world were wasted and 5% were extremely wasted[5]. UNICEF estimates that in developing world 129 million under five children were underweight, nearly one in four and ten percent of them being severely underweight[6]. The prevalence of underweight is higher in Asia than in Africa, with rates of 27 and 21 % respectively[7]. **Methods:** The quantitative research approach was used for the study. The present study adopted mixed research design in two stages, first stage uses cross sectional descriptive survey for the identification of pre-school children suffering with protein energy malnutrition and second stage randomized pretest posttest control group design for evaluating the Impact of instructional program on knowledge regarding protein energy malnutrition among the mothers of preschool children from selected rural areas of Karnataka was adopted. Nola Penders Model was used as a conceptual framework for the study. Cross sectional survey was conducted in the selected rural areas of Dharwad to screen the preschool children to find the prevalence of protein energy malnutrition in them.1000 preschool children's were selected and screened them for assessing protein energy malnutrition by using Indian Academic of Pediatrics Classification (IAP). A total 430 mothers of preschool children residing at selected rural areas of Dharwad were selected by using simple random sampling technique. Structured knowledge questionnaires were used to collect the data from study participants. The results were described by using descriptive and inferential statistics. **Results: Prevalence**-Out of 1000 preschool children 430 children were malnourished that is 43% and 570 that is 57% children were normally nourished. Prevalence of protein energy malnutrition in preschool children is 43% in rural areas of Dharwad. **Knowledge:** Pretest knowledge of experimental group score mean was

14.36 and standard deviation was 2.78. Pretest knowledge score of control group mean was 14.37 and standard deviation was 2.72. **Experimental group:** In the pretest, 23 (9.30%) of participants were having poor knowledge, 195 (90.70%) of participants were having average knowledge and no participants had a good knowledge regarding protein energy malnutrition. **Control group:** In the pre-test, 21(9.77%) of participants were having poor knowledge, 194 (90.23%) of participants were having average knowledge and no participants had a good knowledge regarding protein energy malnutrition. **Interpretation and Conclusion:** The overall findings of the study revealed that the Majority of preschool children mothers' knowledge regarding protein energy malnutrition was poor.
Keywords: Impact, Prevalence, instructional program, knowledge, Prevention, protein energy malnutrition.

Introduction

The most dispersed health and under nutrition problem in developing countries including India, is malnutrition of nutrition of calorie and growth retardation. United Nations International Children's Emergency Funds (UNICEF) document "The Progress for Children" identifies that in the growing world 146 million children underneath 5 years are below weight, predisposing them to serious problems from common childhood ailments[7]. Malnutrition often results from not consuming enough standardized food being available to eat. The main cause of not having high quality food is because of high cost of food or due to poverty. Other cause includes lack barest feeding, gastroenteritis, pneumonia, malaria, and other systematic diseases. There are mainly two categories of under nutrition; first one is protein energy malnutrition (PEM) and dietary deficiency. PEM has two severe categories which includes Marasmus is resulting from lack of protein and calories and other one is kwashiorkor is resulting from due to lack of protein only[8]. Mother's education can generate different types of intra household effects and thereby reducing the risk of nutritional deficiency like protein energy malnutrition. The effects which bring through mothers education are:

- ✓ Improved health and nutrition knowledge.
- ✓ Psychological changes and improved nutritional behaviour.
- ✓ Shift of power relations within the household in favour of better nutrition which includes breast feeding, weaning practices and child feeding and pregnancy diets may lead to more effective dietary behaviour on the part of mothers who manage food resources within the household.

Statement of the Problem

"A study to evaluate the Impact of instructional programme on knowledge regarding protein energy malnutrition among the mothers of preschool children from selected rural areas of Karnataka: Pretest"

Objectives of the study:

- ✓ To assess the prevalence of protein calorie malnutrition in preschool children.
- ✓ To assess the pre interventional, existing level of understanding of mothers of preschool children about malnutrition of protein and calorie.
- ✓ To find the efficiency of instructional module on protein energy malnutrition for mothers of preschool children.
- ✓ To compare the efficiency of instructional programme on protein energy malnutrition between the experimental and controlled batch.
- ✓ To evaluate the relationship between the knowledge of preschool children mothers on calorie protein malnutrition with their undertaken socio demographic variables.

Hypotheses

The hypotheses were formulated for the study as follows-

H_1: There will be remarkable disparity in the mean knowledge score among participants of experimental and non-experimental batch regarding malnutrition of protein calorie during pretest at the significance level of 0.05**.**

H_2: There will be noteworthy difference between the mean knowledge scores of participants who attended the instructional module during pretest and posttest at the significance level of 0.05.
H_3: There will be significant interrelation between levels of knowledge of participants of experimental group regarding protein energy malnutrition during pretest and their selected personal variables.
H_4: There will be significant consortium between levels of knowledge of participants of control group regarding protein energy malnutrition during pretest with their undertaken personal variables

Delimitation
This study is delimited to mothers of preschool children of selected rural areas of Dharwad district and having at least one child suffering with PEM.

Methodology
Research Approach: Quantitative Research Approach
Research Design: Randomized Pretest Post Test Control Group Design.
Sample: Mothers of preschool children from selected rural areas of Karnataka.
Sampling Technique: Simple Random Sampling Technique.
Sample Size: 430 mothers of preschool children residing at selected rural areas of Dharwad.
Tools: A structured knowledge questionnaire with 30 items regarding Protein Energy Malnutrition.

Plan for Data Analysis: Descriptive statistics (frequency, percentage, mean, median and standard deviation) and inferential statistics (T-test) were used for analysis and interpretation of data.

Setting of the Study: Selected Rural Areas of Karnataka.

Sampling Criteria
Present study samples were selected by keeping in view of the following criteria.

Inclusion criteria: Mothers of the preschool children-
- ✓ Whose children are aged between 1-6 years
- ✓ Who can speak and read Kannada
- ✓ Who are willing to participate in the study

Exclusion criteria
- ✓ Preschool Children's mothers who are not available during the period of study.
- ✓ Mothers of preschool children who are having some personal or medical problems at the time of the study.

Variables
Study Variables: Effectiveness of instructional programme on knowledge regarding Protein Energy Malnutrition.

Content validity
The structured questionnaire on comprehension of mothers of preschool children regarding protein-calorie malnutrition was content validated by giving to seven experts from nursing field and general medical practitioner. There was 100% agreement by all experts on all the items. However there were few suggestions to modify some of the items and those were incorporated in final tool.

Reliability of the tool
The accuracy of an instrument was entrenched through pilot study. The reliability of knowledge was tested by Karl Pearson's Co-efficient of Correlation, the score was(r=0.81. Item analysis was done to test internal consistency. This is done by critically evaluating questions based on difficult index and Discriminative index. This indicates that tool were reliable.

Data Collection Instrument

The structured tools of data collection is divided in to three parts as following

Part I-Nutritional grading
Protein energy malnutrition will be graded by using Indian Academy of Pediatrics (IAP) classification.

Part II–Demographic profile
It consists of 11 items related to demographic data which includes an age, religion, educational status, an occupation, family income per month, type of family, parity of children, duration of breast feeding, type of diet and source of information regarding protein energy malnutrition.

Part III–Standardized structured knowledge questionnaire on protein energy malnutrition
This section consists of 30 structured items in 4 sections. Section- A consists of 6 multiple choice items related to introduction and definition, section-B consist of 6 items related to Prevalence, Risk factors, Causes and Clinical manifestation, section-C consists of 13 items related to prevention, section-D consist of 5 items related management and complication.

Results
To appraise the efficiency of an instructional intervention on knowledge regarding protein energy malnutrition for mothers of preschool children at selected rural areas of Karnataka. The data from participants captured conceding to objectives and hypothesis of the undertaken study.

The analysed facts of the study were organized as below mentioned section.

Section 1. Description of Results of the Survey among the Preschool Children to Determine Protein Energy Malnutrition
A survey was conducted among 1000 preschool children at selected Anganwadi's of Dharwad district to find out the preschool children suffering with protein energy malnutrition. The findings of the survey is presented as following-

A. Frequency and Percentage of Preschool children

Table 1. Distribution of children by age (n=1000)

Age	No of children	% of children
3yrs	275	27.50
4yrs	384	38.40
5yrs	270	27.00
6yrs	71	7.10

The data displayed in the table 1 shows that, most of the 384 (38.40%) of the children's belong to 4 years age group and 275(27.5%) belong to the 3 years age group, 270(27.0%) of children's belong to 5 years and remaining children's 71 (7.1%) belong to the of 6 years age group.

Table 2. Distribution of children by Gender (n=1000)

Gender	No of children	% of children
Male	465	46.50
Female	535	53.50
Total	1000	100.00

The data depicted in table 2 describe with respect to gender of children's majority 535 (53.50%) of children's were females and remaining 465 (46.50%) of children's were males.

Table 3. Prevalence of Protein energy malnutrition (n=1000)

Prevalence of Protein energy malnutrition	Number of children's	% of children
Without Protein energy malnutrition	570	57.00
With Protein energy malnutrition	430	43.00
Total	1000	100.00

The data tabled 3 and shows that:

- ✓ A total of 1000 preschool children were screened out of which 430 children's were malnourished that is 43% and 570 that is 57% children's were normally nourished.
- ✓ The Prevalence of protein calorie malnutrition in Rural Areas of Dharwad was 43%.

Table 4. Pervasiveness of Protein Energy Malnutrition (PEM) according to age and gender of children's (n=1000)

	Without PEM	%	With (PEM)	%	Total	%	Chi-square	p-value
Age								
3yrs	177	64.36	98	35.64	275	27.50	40.9905	0.0001*
4yrs	241	62.76	143	37.24	384	38.40		
5yrs	131	48.52	139	51.48	270	27.00		
6yrs	21	29.58	50	70.42	71	7.10		
*p<0.05								

The facts displayed in table 4 shows that majority 20 (70.42%) of the children's belong to 6 years age group were malnourished and 139 (51.48%) belong to 5 years age group were malnourished, 143 (37.24%) of children's belong to 4 years were malnourished and remaining children's 98 (35.64%) belong to 3 years age group were malnourished. This indicates as the age increases the risk of prevalence of PEM is increased in preschool children's.

Table 5. Prevalence of Protein Energy Malnutrition (PEM) by Gender of Children (n=1000)

Gender								
Male	262	56.34	203	43.66	465	46.50	0.1526	0.6961
Female	308	57.57	227	42.43	535	53.50		
Total	**570**	**57.00**	**430**	**43.00**	**100.00**	**100.00**		

The gender wise data displayed in table 5 and showed that, more male children 203 (43.66%) out of 262 were malnourished than female children 227(42.43) out of 308.

Section 3. Description of Comparison of Sample Characteristics of Participants among Experimental and Control Group

Table 6. Comparison of sample characteristics of participants (N=215+215)

Demographic profile	Control group	Experimental group	Chi-square	p-value
1. Age groups				
a) Less than 21yrs	121	123	0.2610	0.96
b) 21-25 yrs	28	25		
c) 26-30 yrs	52	54		
d) More than 30 yrs	14	13		

2. Religion				
a) Hindu	94	104	0.9880	0.80
b) Muslim	40	36		
c) Christian	69	63		
d) Others	12	12		
3. Educational status				
a) Primary school education	89	91	0.6500	0.88
b) High school education	29	32		
c) PUC	61	54		
d) Graduation	36	38		
4. Occupation				
a) Housewife	63	60	0.1760	0.98
b) Daily wages	68	67		
c) Government employee	49	51		
d) Private sector employee	35	37		
5. Monthly income of the family				
a) Less than Rs. 2,000	99	103	0.2170	0.89
b) Rs. 2,001- 4,000	56	56		
c) Rs. 4,001-6,000	60	56		
6. Type of family				
a) Nuclear	105	101	0.7780	0.67
b) Joint	54	62		
c) Extended	56	52		
7. How many children				
a) One	103	108	1.0880	0.78
b) Two	37	30		
c) Three	51	55		
d) Four or more	24	22		
8. Duration of breast feeding				
a) I child	68	65	0.4040	0.93
b) II child	38	39		
c) III child	61	58		
d) IV child	48	53		
9. Type of diet				
a) Vegetarian	79	72	0.7910	0.67
b) Non-vegetarian	44	42		
c) Mixed	92	101		
10. Source of information regarding protein energy malnutrition				
a) Mass Media	130	139	0.9030	0.82
b) Relatives	8	8		
c) Health personnel	17	16		
d) Anganawadi teacher	60	52		

The facts table in the buffet 6 enunciated, the calculated χ^2 values are not significant at the 0.05 level as p values are more than 0.05 for all selected socio demographic variables indicating that the both groups are homogenous with respect to all selected socio demographic variables.

Section 4. Description of Knowledge Scores of Participants

1. Description of mean, median, mode, standard deviation and range of knowledge values of experimental and non-experimental batch participants during pretest and posttest.

Table 7. Aspect wise distribution of Knowledge values of controlled group participants during Pretest (n = 215)

S.No.	Knowledge Aspects	Statements	Aspect	Mean	Median	Mode	SD	Range
A	Introduction and definition	6	Pre test	3.15	3	4	1.12	5
B	Prevalence, risk factors, causes and clinical manifestations	6	Pre test	2.56	3	3	1.83	6
C	Prevention	13	Pre test	6.50	6	6	1.90	8
D	Management and complications	5	Pre test	2.14	2	2	1.33	4
Combined		**30**	**Pre test**	**14.36**	**15**	**15**	**2.72**	**11**

Table 7 reveals the aspect wise mean pre-test knowledge score of participants of control group regarding protein calorie malnutrition.

- ✓ In the first aspect of knowledge about introduction and definition during pretest, mean was 3.15, median was 3; mode was 4 with standard deviation 1.12 and range score of 5.
- ✓ In the second aspect of knowledge, prevalence, risk factors, causes and clinical manifestations during pretest, mean was 2.56, median was 3; mode was 3 with standard deviation 1.83 and range score of 6.
- ✓ In the third aspect of knowledge, prevention of protein energy malnutrition during pretest, mean was 6.50, median was 6; mode was 6 with standard deviation 2.19 and range score of 15.
- ✓ In the fourth aspect of knowledge, management and complications during pretest, mean was 2.14, median was 2; mode was 2 with standard deviation 1.33 and range score of 4.
- ✓ Overall knowledge scale, during Pretest, mean was 14.36, median was 15; mode was 15 with standard deviation 2.72 and range score of 11.

Table 8. Aspect wise dispensation of knowledge scores of research batch participants during Pretest (n = 215)

S.No.	Knowledge Aspects	Statements	Aspect	Mean	Median	Mode	SD	Range
A	Introduction and definition	6	Pre test	3.10	3	3	1.16	5
B	Prevalence, risk factors, causes and clinical manifestations	6	Pre test	2.72	3	3	1.84	6
C	Prevention	13	Pre test	6.46	6	6	2.03	8
D	Management and complications	5	Pre test	2.06	2	2	1.31	4
Combined		**30**	**Pre test**	**14.35**	**15**	**15**	**2.78**	**11**

Table 8 reveals the aspect wise mean comprehension score in experimental group participants' regarding malnutrition of protein calorie during pre-test.

- ✓ In the first aspect of knowledge about introduction and definition during pretest, mean was 3.10, median was 3; mode was 3 with standard deviation 1.16 and range score of 5.
- ✓ In the second aspect of knowledge, prevalence, risk factors, causes and clinical manifestations during pretest, mean was 2.72, median was 3; mode was 3 with standard deviation 1.84 and range score of 6.
- ✓ In the third aspect of knowledge, prevention of protein energy malnutrition during pretest, mean was 6.46, median was 6; mode was 6 with standard deviation 2.03 and range score of 8.
- ✓ In the fourth aspect of knowledge, management and complications during pretest, mean was 2.06, median was 2; mode was 2 with standard deviation 1.31 and range score of 4.
- ✓ Overall knowledge scale, during Pretest, mean was 14.35, median was 15; mode was 15 with standard deviation 2.78 and range score of 11.

Description of mean Pretest knowledge scores of research and Non Research batches

The evaluate magnitude of disparity among Pretest command values of participants of research and Non Research batches regarding protein energy malnutrition, independent 't' value was computed and findings are presented in Table The hypothesis stated is as follows–

H_{01}: There will be no significant difference in the mean pretest knowledge scores of participants regarding protein energy malnutrition among Experimental groups and Control group at significance extent of 0.05.

Table 9. Distribution of knowledge scores of participants of experimental group and control group during pretest (N: 215+215)

Groups	Mean	$Mean_D$	SD_D	SEMD	Independent 't' test	P value
Experimental group	14.35	0.01	0.06	0.26	0.03	0.92
Control group	14.36					

The figures tabled in the table 9 illustrate that, the knowledge mean difference between two groups was 0.01 with standard deviation of the difference ±0.06. The statistical significance of the pretest knowledge score difference was tested in between the participants of study and controlled batch and the 't' (428) = 0.03 is reported to be not noteworthy as 'p' values is 0.009 at significance level of 0.05. Thus, the findings support null hypothesis H_{01} and the research hypothesis is rejected. Hence, it is inferred that there is no difference in knowledge score of the participants of experimental group and control group regarding protein energy malnutrition. This indicates both group are started with equivalent baseline with respect to knowledge of patrician.

Description of findings related to level of knowledge scores of experimental and on research group during pretest

Table 10. Frequency and Percentage distribution of participants based on level of knowledge regarding Protein Energy Malnutrition (n=215+215)

Groups	Pretest scores		
	Poor	Average	Good
	f (%)	f (%)	f (%)
Experimental group	21 (9.7)	194 (90.2)	00
Control group	20 (9.3)	195 (90.7)	00

The figures displayed in Table 10 describe that,

- ✓ The Experimental group in Pretest survey showed that 90.2% (194) of participants had average knowledge and 9.7% (21) of them had poor knowledge rating on Protein Energy Malnutrition.
- ✓ The Control group possessed more or less the same knowledge level both in Pretest and Posttest. In Pretest 90.7% (195) had average and 9.3% (20) had poor knowledge on Protein Energy Malnutrition.

Description of findings related to association between Pretest knowledge scores of participants of both groups and their socio demographic variables

a. Chi-square values between Pretest levels of knowledge of participants regarding protein energy malnutrition and their selected personal variables.

Experimental group

To find out the association between the pre-test levels of knowledge of participants of experimental group and selected personal variables, Chi square was calculated and the null hypothesis are formulated below-

H_{05}: There will be no significant association in knowledge score of experimental group subjects regarding protein energy malnutrition and their selected personal variables during pretest.

Table 11. Association between demographic profile of mother with Pretest levels of knowledge in experimental group (n=215)

Demographic profile	Level of Knowledge			Total	Chi square value	P value
	Poor	Average	Good			
1. Age groups						
a) Less than 21yrs	7	116	0	123	9.59	0.02*
b) 21-25 yrs	3	22	0	25		
c) 26-30 yrs	7	47	0	54		
d) More than 30 yrs	4	9	0	13		
2. Religion						
a) Hindu	10	53	0	63	8.81	0.03*
b) Muslim	6	30	0	36		
c) Christian	5	99	0	104		
d) Others	0	12	0	12		
3. Educational status						
a) Primary school education	6	85	0	91	2.42	0.49
b) High school education	5	27	0	32		
c) PUC	6	48	0	54		
d) Graduation	4	34	0	38		
4. Occupation						
a) Housewife	9	51	0	60	8.18	0.04*
b) Daily wages	2	65	0	67		
c) Government employee	8	43	0	51		
d) Private sector employee	2	35	0	37		
5. Monthly income of the family						
a) Less than Rs. 2,000	9	94	0	103	0.23	0.88
b) Rs. 2,001- 4,000	6	50	0	56		
c) Rs. 4,001-6,000	6	50	0	56		
6. Type of family						

a) Nuclear	12	89	0	101	0.9700	0.61
b) Joint	5	57	0	62		
c) Extended	4	48	0	52		
7. How many children						
a) One	12	96	0	108	0.58	0.89
b) Two	2	28	0	30		
c) Three	5	50	0	55		
d) Four or more	2	20	0	22		
8. Duration of breast feeding						
a) I child	5	60	0	65	1.00	0.80
b) II child	3	36	0	39		
c) III child	7	51	0	58		
d) IV child	6	47	0	53		
9. Type of diet						
a) Vegetarian	5	67	0	72	1.62	0.44
b) Non-vegetarian	6	36	0	42		
c) Mixed	10	91	0	101		
10. Source of information						
a) Mass Media	15	124	0	139	1.25	0.73
b) Relatives	0	8	0	8		
c) Health personnel	1	15	0	16		
d) Anganawadi teacher	5	47	0	52		
Total	21	194	0	215		
***p<0.05**						

Data presented in table 11 shows that, computed Chi-square value for association between pre-test level of knowledge of experimental group regarding protein energy malnutrition and their selected demographic variables is found to be statistically significant at 0.05 levels for age, religion and occupational status of participants and does not found statistically significant for other socio demographic variables. Hence the Hypothesis $H_{05}$is partially accepted reveling there is statistical significant association found between the level of knowledge of participants and their age, religion and occupational status.

Control group

To find out the association between the pre-test levels of knowledge of participants of experimental group and selected personal variables, the test of chi square was enumerated and following null hypothesis is formulated.

H_{06}: There will be no significant association in levels of knowledge of participants of control group regarding protein energy malnutrition and their selected personal variables during pretest.

Table 12. Association between demographic profile of mother with pretest levels of knowledge in control group (n=215)

Demographic profile	Level of Knowledge			Total	Chi square value	P value
	Poor	Average	Good			
1. Age groups						
a) Less than 21yrs	10	111	0	121	1.03	0.79
b) 21-25 yrs	2	26	0	28		
c) 26-30 yrs	6	46	0	52		
d) More than 30 yrs	2	12	0	14		
2. Religion						

a) Hindu	7	62	0	69	1.32	0.72
b) Muslim	4	36	0	40		
c) Christian	9	85	0	94		
d) Others	0	12	0	12		
3. Educational status						
a) Primary school education	6	83	0	89	1.76	0.62
b) High school education	4	25	0	29		
c) PUC	7	54	0	61		
d) Graduation	3	33	0	36		
4. Occupation						
a) Housewife	6	57	0	63	0.28	0.96
b) Daily wages	6	62	0	68		
c) Government employee	4	45	0	49		
d) Private sector employee	4	31	0	35		
5. Monthly income of the family						
a) Less than Rs. 2,000	10	89	0	99	0.70	0.70
b) Rs. 2,001- 4,000	6	50	0	56		
c) Rs. 4,001-6,000	4	56	0	60		
6. Type of family						
a) Nuclear	10	95	0	105	1.89	0.38
b) Joint	7	47	0	54		
c) Extended	3	53	0	56		
7. How many children						
a) One	12	91	0	103	2.33	0.50
b) Two	2	35	0	37		
c) Three	3	48	0	51		
d) Four or more	3	21	0	24		
8. Duration of breast feeding						
a) I child	4	64	0	68	1.42	0.70
b) II child	4	34	0	38		
c) III child	7	54	0	61		
d) IV child	5	43	0	48		
9. Type of diet						
a) Vegetarian	6	73	0	79	0.54	0.76
b) Non-vegetarian	4	40	0	44		
c) Mixed	10	82	0	92		
10. Source of information						
a) Mass Media	12	118	0	130	0.36	0.94
b) Relatives	1	7	0	08		
c) Health personnel	1	16	0	17		
d) Anganwadi teacher	6	54	0	60		
Total	20	195	0	215		
***p<0.05**						

Data presented in table 12 shows that, computed Chi-square value for association between pretest level of knowledge of control group regarding protein energy malnutrition and their selected demographic variables. It does not found statistically significant for their socio demographic variables.

Hence the null hypothesis H_{06} is accepted and research hypothesis is disqualified. It indicates there will be no marked relationship between pretest levels of knowledge of participants of control group regarding protein energy malnutrition and their selected personal variables.

Discussion

- ✓ The control group average value of Pretest scores was, mean 14.36, median 15; mode 15, standard deviation 2.72 and range score 11.
- ✓ The experimental group average value of Pretest scores was, mean 14.35, median 15; mode 15, standard deviation 2.78 and range score 11.

Level of knowledge scores in Pretest

In the Pretest the experimental batch of 215 subjects, 194(90.2%) showed average level of understanding and the remaining 21(9.7%) had poor understanding regarding protein energy malnutrition.

In the pretest of control group with a batch of 215, 90.7% (195) of participants documented an average level of understanding and the remaining 9.3% (20) of participants were encountered poor knowledge regarding protein energy malnutrition.

Association between Pretest knowledge scores of respondents and their selected socio demographic variables

Calculated Chi-square an incentive for relationship between pretest level of information on experimental group with respect to protein vitality lack of healthy sustenance and their chose segment factors is seen as measurably huge at 0.05 levels for age, religion and word related status of members and doesn't discovered factually critical for other socio segment factors.

Calculated Chi-square an incentive for relationship between Pretest level of information on control group with respect to protein vitality lack of healthy sustenance and their chose segment factors. It doesn't discover factually noteworthy for their socio segment factors.

Conclusion

The main focus of this study was to evaluate the Impact of instructional program on comprehension regarding protein vitality under nutrition among the mothers of preschool children from selected rural areas of Karnataka. A quantitative research strategy and quasi experimental pretest controlled batch sketch was used to get the solutions for the research questions in the study. The study recruited four hundred thirty samples (215 in each group) and samples were recruited by using the probability simple random sampling technique. The tools of data collection were prepared by the investigator after thorough review of literature and taking necessary advice by experts in the field of nutritional needs of the preschool children. The data was collected from all four hundred thirty samples by investigator.

All the participants of the selected setting were cooperated and willingly take part in the study. They gave free and reliable responses for all the questions asked to them by the investigators.

This research is based on the Nola Penders health Promotion conceptual model.

Further, the important conclusion drawn on from the present study includes the following-

- ✓ Majority of samples in both exploratory and controlled bunch were recorded inadequate knowledge regarding protein energy malnutrition.

- ✓ The knowledge level of the participants were increased after exposing to the instructional program on protein energy malnutrition but there was no change in the level of knowledge of participants of control group who have not exposed to any interventional program.
- ✓ Instructional program was effective method for educating the mothers regarding protein energy malnutrition as it is shown in the transformation of comprehension of experimental batch participants as compared with controlled batch.
- ✓ The remarkable consortium was found among extent of understanding of participants with few of their socio demographic variables.

Conflict of Interest

There is no conflict of interest stated.

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