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A Pilot study to assess nutritional status of preschool children and the effectiveness of planned teaching programme on knowledge, attitude and practice regarding dietary habits in relation to prevention of malnutrition among mothers of preschool children

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ABSTRACT

Background

Malnutrition is one of the significant factors contributing to Infant and child mortality in developing countries of the world. Nutrition during the first five years has an impact not only on growth and morbidity during childhood, but also acts as a determinant of nutritional status in adolescent and adult life.

Aims and objectives

The study aimed at assessing the nutritional status, pre test and post test knowledge, attitude and practice scores regarding the prevention of malnutrition among mothers of preschool children. To fine out the effectiveness of planned teaching programme regarding the prevention of malnutrition, to find the correlation between knowledge, attitude, and practice scores and to determine the association between knowledge, attitude and practice scores with selected demographic variables.

Materials and methods

Nutritional status of preschool children was assessed by taking height and weight, knowledge of mothers was assessed by structured knowledge questionnaires, practice and attitude of mothers of pre school children was assessed by rating scale and likert scale respectively.

Results

The study results shows that 72.5 % of children are having normal nutritional status, 7.5% are having grade II malnutrition. There is a significant correlation between knowledge and practice scores (r =0.4066), there is a mild correlation between knowledge and attitude score (r =0.15), there is a is a mild correlation between practice and attitude scores (r =0.01). there is a significant difference between pre test and post test knowledge scores (t=7.75, df=t39), there is a significant difference between pre test and post test attitude scores (t=29.85, df=t39), there is a significant difference between pre test and post test practice scores (t=5.48, df=t39), there is no significant association between knowledge, attitude and practice scores with selected demographic variables.

Conclusion

The study concludes that mothers having poor knowledge, attitude and practice regarding prevention of malnutrition among preschool children. Planned teaching programme is a helpful method for improving mothers knowledge, attitude and practice of mothers.

Keywords: Preschool children, Dietary habits, Planned teaching programme, Knowledge, Attitude, Practice, Mothers

INTRODUCTION

In India health hazards associated with under nutrition and micronutrients deficiencies remain major health problems. The past three decades have witnessed the emergence of over nutrition as a problem in school age children in developed countries. According to WHO 2007 estimates, there are around 19.3 and 31.6 percent of underweight and stunted children in the developing countries as compared to 1.5 and 6.0 percent of underweight and stunted children respectively in developed world (United Nation, 2010). Therefore, malnutrition is considered as wide spread public health problem especially in developing countries. The prevalence of underweight and stunted children in India is amongst the highest world, and nearly doubles that of Sub -Saharan Africa with dire consequences for mobility, mortality, productivity and economic growth [1].Almost half of the preschool children are stunted, two-fifths of them are underweight and one-fifths of them are wasted and nearly 60 million children are underweight in India. Although the problem of malnutrition, as believed by nutritionist is multifaceted not just related to food shortage but feeding practices are believe to be the most important for child nutrition [2, 3]. Efforts to quantify child feeding practices have been limited by due to methodological issues [4]. Most of the research on relationship between child feeding practices and nutrition outcome has focused on single behavior e.g. exclusive breastfeeding, timing of introduction of complimentary food, duration of breastfeeding etc [5,6,7]. The World Health Organization provided regulated guidelines for child feeding practices in 2008. Despite of the present effort there have been a very few studies which attempted to build a composite index of feeding practices. In Indian context, this kind of study is rare due to data limitation [8]. Meals take place big influence over the family environment and the type of food the children's eat. The eating environment can have a positive or negative impact on children's eating habits. Children who eat with their family tend to eat healthier food like fruits vegetables and whole grains. They are also at lower risk for becoming overweighting. Parents can influence their children eating habits in a positive way by being a good role model.

Problem Statement

"Assess nutritional status of preschool children and the effectiveness of planned teaching programme on knowledge, attitude and practice regarding dietary habits in relation to prevention of malnutrition among mothers of preschool children in selected areas of Aurangabad district"

Objectives of the study

1. To Assess the nutritional status of preschool children
2. Assess the pre test knowledge, attitude and practice among mothers of preschool children.
3. To find out correlation between knowledge and practice scores of dietary habits in relation to prevention of malnutrition
4. To find out correlation between knowledge and attitude scores of dietary habits in relation to prevention of malnutrition
5. To find out correlation between attitude and practice scores of dietary habits in relation to prevention of malnutrition
6. To determine the effectiveness of PTP on dietary habits in relation to prevention of malnutrition among mothers of preschool children.
7. To determine the association between pre test knowledge, attitude and practice scores with selected demographic variables.

Hypothesis

Hypothesis will be tested at a 0.05 level of significance.

H_1: There is a significant correlation between knowledge and practice scores on dietary habits in relation to prevention of malnutrition.

H_2: There is a significant correlation between knowledge and attitude scores on dietary habits in relation to prevention of malnutrition.

H_3: There is a significant correlation between attitude and practice scores on dietary habits in relation to prevention of malnutrition.

H_4: There is a significant difference between pre test and post test knowledge, attitude and practice scores

H_5: There is a significant association between knowledge, attitude and practice scores with selected demographic variables mothers of preschool children

Operational definitions

Knowledge

It refers to the right responses given by mothers of preschool children to the questions asked by the investigator during the interview regarding dietary habits in relation to prevention of mal nutrition.

Practice

It refers to the measures taken by the mother of preschool children to prevent malnutrition in their children as expressed by them in terms of scores on a practice questionnaire.

Attitude

In this study it refers to the expressed feelings of mothers on dietary habits in relation to prevention of malnutrition among preschool children.

Dietary habits

It refers to habitual food practice to their preschool children

Malnutrition

In this study it refers to condition that develop when body does not get the right amount of enough nutrients.

Mothers

In this study it refers to perform the role of bearing some relation to their preschool children.

Effectiveness

It indicates to gain the knowledge as determined by the significant difference in pre and post knowledge score on dietary habits in relation to the prevention of malnutrition.

Planned teaching programme

It refers to systematically developed instructional and teaching aids designed for mothers of preschool children to provide information regarding dietary habits in relation to the prevention of malnutrition.

MATERIAL AND METHODS

Source of data

In this study the data will be collected from mothers of preschool children residing in selected rural areas of Aurangabad District.

Research design

Pre experimental one group pre test post test design.

Setting

The study is conducted at selected area of Aurangabad District

Population

Population includes preschool children and their mothers

Method of data collection

Nutritional status of pre school children was assessed by taking height and weight, knowledge of mothers was assessed by structured knowledge questionnaires, practice and attitude of mothers of pre school children was assessed by rating scale and likert scale respectively. Interview method was used for data collection.

RESULT OF THE STUDY

Section 1: Demographic data

Table no 1: shows that 60% of mothers belongs to <2 1years, 22.5% with >31 years, and as a least 7.5% belongs to 26-30 years.

Demographic variables	Frequency	%
Age in years		
<21	24	60
22-25	4	10
26-30	3	7.5
>31	9	22.5
Total	40	100

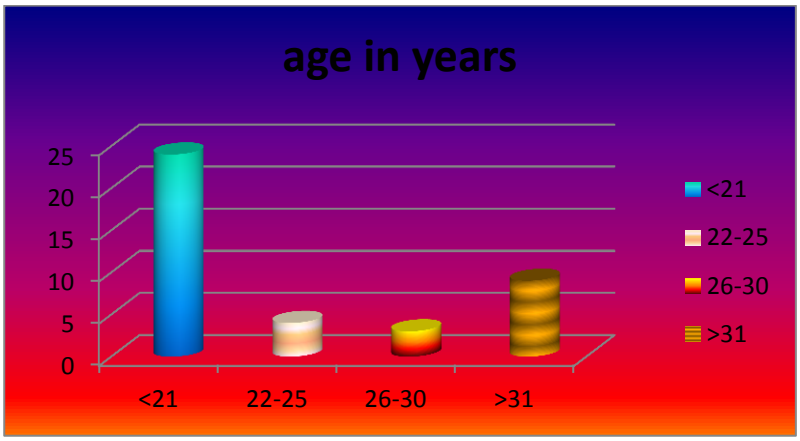

Fig no 1: cylindrical bar diagram shows that sample distribution according to age in years.

Table no 2: represents that 40% of mothers belongs to house wife as a occupation, 25% as a business, 20% as a daily wages, 15% as a professional.

Occupation	F	%
House wife	16	40
Daily wages	8	20
Professional	6	15
business	10	25
Total	40	100

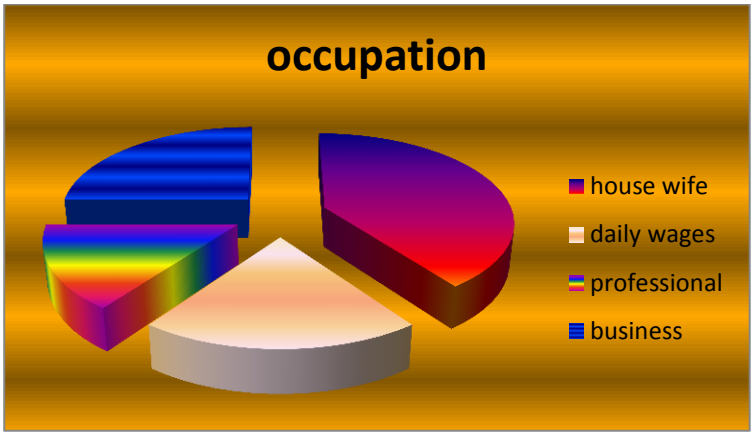

Fig no 2: split pie diagram shows sample distribution according to occupational status of mother

Table no 3: explains that majority of mothers I e 30% had two children, 27.5% had > three, 22.5% had three and 20% had only one child.

Number of children	F	%
One	8	20
Two	12	30
Three	9	22.5
>three	11	27.5
Total	40	100

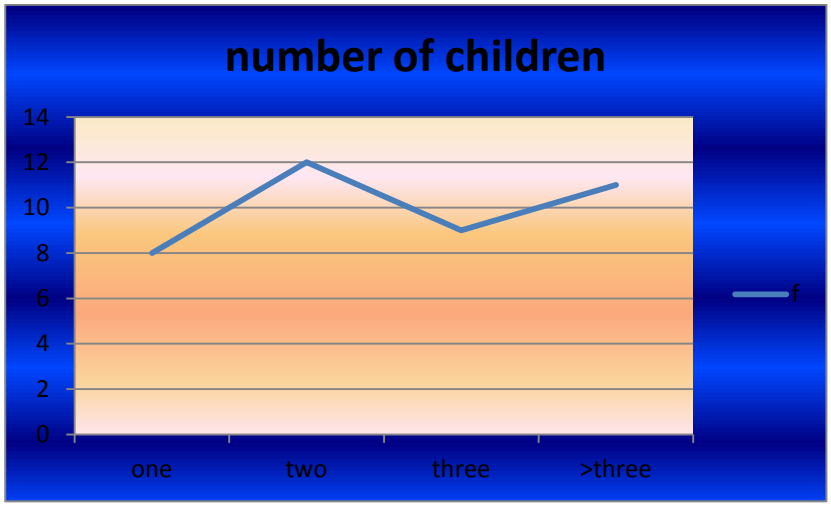

Fig no 3: line diagram shows that sample distribution according to number of children

Section 2: Nutritional status of preschool children

Table no 4: depicts that 72.5% children belongs to normal nutritional status, 20% are grade I and 7.5% are in grade II malnutrition.

S NO	Nutritional status	Weight of age (% of expected)	Frequency	Percentage
1	Normal	>80	29	72.5
2	Grade I	71-80	8	20
3	Grade II	61-70	3	7.5
4	Grade III	50-60	0	0
5	Grade IV	<50	0	0
		Total	40	100

Section 3: comparison of pre test and post test

Comparison of Pre test and post test knowledge

Table no 5: shows that comparison between pre test and post test knowledge scores of mothers.

S No	Knowledge level	Scores	Pre test	%	Post test	%
1	Poor	0-8	6	15	0	0
2	Average	9-16	19	47.5	2	5
3	Good	17-24	14	35	29	72.5
4	Excellent	25-32	1	2.5	9	22.5
		Total	40	100	40	100

Fig no 4: line diagram shows that distribution of pre test and post test knowledge scores.

Comparison of Pre test and post test practice

Table no 6: explains that comparative scores of pre test and post test of practice

S No	practice level	Scores	Post test	%	Pre test	%
1	Poor	0-26	0	0	0	0
2	Average	27-52	5	12.5	31	77.5
3	Good	53-78	34	85	9	22.5
4	Excellent	79-104	1	2.5	0	0
	Total		40	100	40	100

Fig no 5: multiple bar diagram shows that pre test and post test practice scores.

Comparison of Pre test and post test attitude

Table no 7: represents that comparison of pre test and post test attitude scores.

S No	Attitude level	Scores	Pre test	%	Post test	%
1	Most unfavorable	26-52	0	0	0	0
2	Unfavorable	53-78	26	65	17	42.5
3	Favorable	79-104	14	35	21	52.5
4	Most favorable	105-130	0	0	2	5
		Total	40	100	40	100

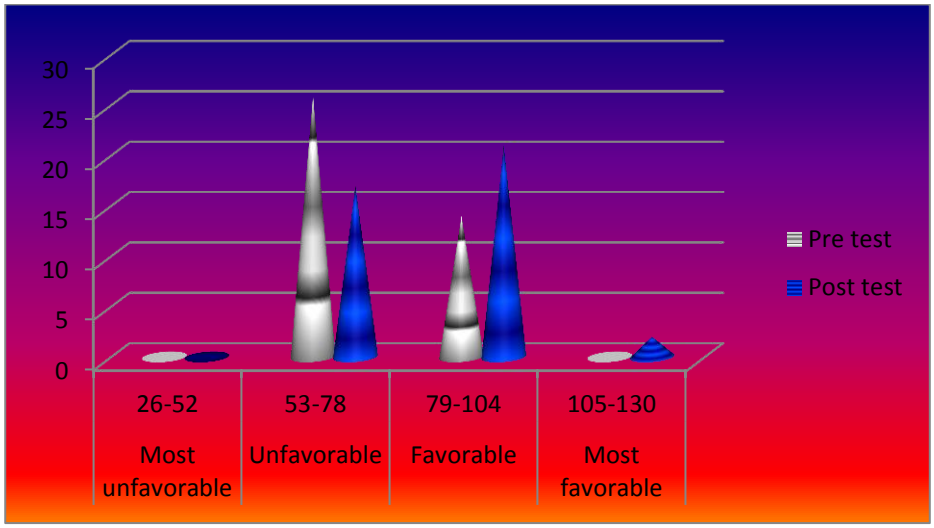

Fig no 6: cone diagram shows distribution of pre test and post test attitude scores

Section 4: correlation between variables

Correlation between knowledge and practice scores of dietary habits

Table no 8: shows that there is a significant correlation between knowledge and practice variable.

variables	Mean	SD	R value	significance
Knowledge	14.3	5.69	0.4066	S
Practice	47.225	7.94		

Correlation between knowledge and attitude scores of dietary habits

Table no 9: there is a mild correlation between knowledge and attitude scores.

Variables	Mean	SD	R value	Significance
Knowledge	14.3	5.69	0.15	S
Attitude	76.475	6.19		

Correlation between attitude and practice scores of dietary habits

Table no 10: shows that there is a mild correlation between practice and attitude scores.

variables	Mean	SD	R value	Significance
Practice	47.225	7.94	0.01	S
Attitude	76.475	6.19		

Section 5: Effectiveness of PTP on dietary habits

Effectiveness of PTP on knowledge

Table no 11: shows that there is a significant difference between pre test and post test knowledge scores

Test	Mean	SD	T value	Significance
Pre test	14.3	5.69	7.75	S
Post test	22.275	2.84		

Effectiveness of PTP on practice

Table no 12: there is a significant difference between pre test and post test practice scores.

Test	Mean	SD	T value	Significance
Pre test	47.225	7.94	5.48	S
Post test	58.05	8.67		

Effectiveness of PTP on attitude

Table no 13: there is a significant difference between pre test and post test attitude scores.

Test	Mean	SD	T value	Significance
Pre test	76.475	6.19	29.85	S
Post test	81.45	11.16		

Section 6: Association between knowledge and demographic variables

Table no 14: depicts that there is no significant association between knowledge scores and selected demographic variables.

S No	Demographic variables	D F	Chi square	significance
1	Age in years	1	1.88	N S
2	Occupation	2	2.975	N S
3	Number of children	3	4.015	N S
4	Religion	2	1.996	N S
5	Diet	1	0.402	N S
6	Number of serving to the child	2	1.004	N S
7	Educational status	2	5.8375	N S
8	Marital status	1	1.847	N S
9	Income	2	4.26	N S
10	Had an early information	1	0.16	N S

S: significant NS: Non significant

d f 1=3.81, d f 2= 5.991, d f 3= 7.815

Association between practice and demographic variables

Table no 15: depicts that there is no significant association between practice scores and selected demographic variables.

S No	Demographic variables	D F	Chi square	Significance
1	Age in years	1	0.1	N S
2	Occupation	1	0.303	N S
3	Number of children	1	0.4	N S
4	Religion	2	4.02	N S
5	Diet	1	1.6	N S
6	Number of serving to the child	2	2.26	N S
7	Educational status	2	0.62	N S
8	Marital status	2	3.96	N S
9	Income	2	0.156	N S
10	Had an early information	1	0.098	N S

S: significant NS: Non significant

d f 1= 3.81, d f 2= 5.991, d f 3= 7.815

Association between attitude and demographic variables

Table no 16: depicts that there is no significant association between attitude scores and selected demographic variables.

S No	Demographic variables	D F	Chi square	Significance
1	Age in years	1	0.015	N S
2	Occupation	2	1.89	N S
3	Number of children	1	0.4	N S
4	Religion	2	0.86	N S
5	Diet	1	0.08	N S

6	Number of serving to the child	2	3.692	N S
7	Educational status	2	3.05	N S
8	Marital status	2	3.143	N S
9	Income	2	2.227	N S
10	Had an early information	1	0.56	N S

S: significant NS: Non significant

d f 1= 3.81, d f 2= 5.991, d f 3= 7.815

DISCUSSION

The present study shows that out of 40 preschool children 72.5 % of children are having normal nutritional status, 7.5% are having grade II malnutrition. There is a significant correlation between knowledge and practice scores (r =0.4066), there is a mild correlation between knowledge and attitude score(r =0.15), there is a is a mild correlation between practice and attitude scores (r =0.01) of mothers of pre school children. There is a significant difference between pre test and post test knowledge scores (t=7.75, df=t39), there is a significant difference between pre test and post test attitude scores (t=29.85, df=t39), there is a significant difference between pre test and post test practice scores (t=5.48, df=t39), there is no significant association between knowledge, attitude and practice scores with selected demographic variables.

CONCLUSION

The study concludes that there is a mild correlation between knowledge, attitude and practice scores. The planned teaching programme is helpful method of teaching for the improvement of knowledge, practice and attitude of mothers regarding prevention of malnutrition among preschool children. It influences others to conduct the similar study in different setting with larger samples.

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