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Research Article

Effectiveness of Planned Teaching Program Regarding Malnutrition on Mother of Children between 6 Months and 36 Months in Urban Area

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ABSTRACT

Introduction: Malnutrition is a worldwide problem today. The main target of undernutrition is the preschooler, pregnant, and nursing mothers. It is estimated that about 170 million children "under-five" year of age, i.e., 30% of worlds children are malnourished in terms of being underweight, over 2/3rd of these malnourished children belong to Asia. **Aim:** A study to assess the effectiveness of planned teaching program on the knowledge of mothers of 6–36-month children on malnutrition in selected Anganwadi of Indore. **Materials and Methods:** This was a community-based study compromising of 50 mothers purposively selected. Data were collected by administering structured knowledge questionnaire and after that planned teaching program and post-test was taken after 7 days. **Results:** The total mean of pre-test was 9.5. Most of the subject had 32 (64%) average knowledge and 5 (10%) subjects have good and only 13 (26%) belong to poor. After administration of planned teaching program regarding malnutrition, the total mean of post-test was 14.06. This shows that there is gain in knowledge. Most of the subject that is 7 (14%) average remaining respondent had good knowledge 43 (86%). The mean post-test knowledge is 14.06 which is higher than pretest 9.5, the actual gain of knowledge is 4.56 and computed't' value (t_{50} = 15.39) is more than tabled value (t_{50} = 1.671) at the level of 0.05 thus indicated highly significant difference. **Conclusion:** The finding of this study indicates that planned teaching program on malnutrition appears to be effective in improving knowledge and practice of mothers of 6–36-month children relating to feeding and caring behaviors. Increase in the knowledge definitely showed a positive effect on the health of the child.

Keywords: Knowledge, Malnutrition, Mothers

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Introduction

Nearly half of all deaths in children under 5 are attributable to undernutrition; undernutrition puts children at higher risk of dying from common infections, increases the frequency and severity of such infections, and delays recovery. The interaction between undernutrition and infection can create a potentially lethal cycle of worsening disease and nutritional deterioration. Poor nutrition in the first 1000 days of a child's existence can additionally lead to stunted growth, which is related with impaired cognitive ability and reduced school and work performance. We are still some distance from a world besides malnutrition. While the 2019 edition of the joint malnutrition estimate suggests that stunting incidence has been declining on account that the 12 months 2000, nearly one in four – 149 million adolescents underneath 5–were stunted in 2018, and over 49 million suffered from wasting. Meanwhile, the number of overweight young

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people worldwide has remained stagnant for greater than a decade.[1]

According to the World Health Organization, starvation is the gravest single hazard to the world's public health. According to Jean Ziegler (the United Nations Special Reporter on the Right to Food for 2000 to March 2008), mortality due to malnutrition accounted for 58% of the whole mortality in 2006: "In the world, about 62 hundreds of thousands people, all causes of loss of life combined, die each year. One in 12 humans international is malnourished. In 2006, more than 36 tens of millions died of starvation or diseases due to deficiencies in micronutrients." The World Health Organization estimates that one-third of the world is well-fed, one-third is underfed, and one-third is starving. Every 3.6 s someone dies of hunger.[2]

It is discovered that mother's toddler and young infant feeding decisions were fairly influenced using their very own mothers. It shows focusing conduct alternate counseling on grandmothers substantially improved consumption of nutrient-rich diet in mothers by 30% and in infants through 25% as well as attained appreciably higher average child start weights in intervention versus manipulate sites.[3] It is worth noting that globally, optimal breastfeeding could prevent 13% of deaths of children aged <5 years, whereas appropriate complementary feeding (CF) practices might result in an additional 6% reduction in under-five mortality.[4] If CF is started earlier than 6 months of age, and early CF might expose infants to pathogenic microbes contained in unhygienic food or water.[5]

Objectives

The objectives of this study were as follows:

1. To assess the knowledge of mothers of 6 months–36 months of children regarding malnutrition.
2. To find out the association between pre-test knowledge of mothers of 6–36-month children regarding malnutrition with selected demographic variables.
3. To evaluate the effectiveness of planned teaching program on the knowledge of mothers of 6–36-month children regarding malnutrition.

Hypotheses

- RH0: There will be no significant difference between pre-test and post-test the knowledge of mothers of 6–36-month children on malnutrition in selected Anganwadi of Indore ($P < 0.05$).
- RH1: There will be a significant difference between pre-test and post-test knowledge of mothers of 6–36-month children on malnutrition in selected Anganwadi of Indore ($P < 0.05$).
- RH2: There will be a significant association between pre-test knowledge with selected demographic variables ($P < 0.05$).

Materials and Methods

Study design and setting

This was a community-based evaluator study. Data were collected from the mothers of children between 6 months and 36 months in 2018. The study was conducted at Pardeshipura in Indore.

Sample size and sampling method

The study comprised 50 mothers of children between 6 months and 36 months. Purposive sampling method was used when selecting participants among mothers. The mothers who were willing to give consent to participate in the study were included in the sample.

Data collection tool and technique

A structured knowledge questionnaire including sociodemographic variables was used for data collection. Section "A" consists of a structured questionnaire to collect baseline data, which consisted of 7 items for sociodemographic data for obtaining factors such as age, education, religion, occupation, income/month, marital status, dietary habits, and number of children at each family. Section B consists of questions related to knowledge of malnutrition. Assessment of knowledge about meaning and causes of malnutrition, assessment of knowledge clinical features of malnutrition, assessment of knowledge regarding treatment and management, and assessment of knowledge regarding preventive aspects of malnutrition. It consisted of 20 items covering the areas of procedure. Item had two/four responses and each item scored as 1. Score of each item refers to the presence or absence of knowledge, 0–6 indicates poor knowledge, 7–13 indicates average knowledge, and 14–20 indicates good knowledge. Scoring was done in accordance with suggestions of experts in community health nursing field.

Inclusion criteria

The following criteria were included in the study:

1. Mothers of 6 months–36 months of children attending Anganwadi.
2. The mothers of 6 months–36 months of children, who are willing to participate.
3. Mothers of 6 months–36 months of children, who are available at the time of data collection in Anganwadi.

Exclusion criteria

The following criteria were excluded from the study:

1. Mothers of child whose age is >36 months.
2. Mothers whose children are not attending Anganwadi.
3. Mothers of outside community.

Independent variable

In the present study, the independent variable refers to the planned teaching program to improve the knowledge of mothers of 6 months–36 months of children.

Dependent variable

In the present study, the dependent variable refers to the knowledge of mothers of 6 months–36 months of children.

Reliability of tool

Pre-testing and reliability of the tools were carried out among10 students. The reliability of the test was found out using Karl Pearson's correlation coefficient formula. The reliability of the structured knowledge questionnaire (schedule) was found to be "r = 0.837" which indicates that the tool was reliable.

Ethical consideration

The researcher obtained permission from the Nigam Parshad of Pardeshipura area to conduct the study at the community. Written informed consent was obtained from each participant. The researcher assured the participants of confidentiality and anonymity and no name or any form of identity was indicated on the interview schedule form.

Results

This section deals with the data pertaining to the sample characteristics of the subjects. It is presented and analyzed in terms of frequency and percentage distribution [Tables 1 and 2].

Pre-test knowledge of the mothers regarding malnutrition

Table 3 shows the frequency and score most of the sample, i.e., 32 (64%) scored average knowledge and 13 (64%) sample scored poor knowledge and 5 (10%) scored good knowledge. The total mean score of pre-test was 9.5. This shows that there is some knowledge deficit.

Post-test knowledge of the mothers regarding malnutrition

Table 4 shows the frequency and percentage, most of the sample, i.e., 7 (14%) average knowledge and 43 (86%) sample good knowledge**.**

Discussion

The findings were discussed under the following sections:

Table 1: Frequency and percentage distribution of sociodemographic variables

Demographic variables	Frequency (n)	Percentage
Age in years		
16–20	5	10
21–25	26	52
26–30	14	28
31–35	5	10
Religion		
Hindu	49	98
Muslim	1	2
Christian	0	0
Others	0	0
Education		
Illiterate	0	0
Primary education	15	30
Higher secondary	32	64
Graduate and above	3	6
Occupation		
Housewife	12	24
Business	0	0
Working	38	76
Any other	0	0
Monthly income in Rs.		
<4000	0	0
4001–6000	5	10
6001–8000	35	70
>8001	10	20
Dietary habit		
Vegetarian	38	76
Non-vegetarian	12	24
Number of children at home		
One	20	40
Two	13	26
Three	17	34
More than three	0	0

Section I – Characteristics of the sample

It is observed that maximum mothers 26 (52%) belonged to the age group of 21–25 years (52%), followed by 14 (28%) of age group 26–30 years, the mothers who were in the age group of 16–20 years comprise 5 (10%), and the sample who includes in the age group of 31–35 years was 5 (10%).

The present study comprises religion 49 (98%) belong to Hindu religion and 1 (2%) belongs to Muslim religion and none sample comes under other and Christian religion. In education, 32 (64%) belonged to higher secondary, 15 (30%) have primary education, 3 (6%) are graduate, and no one was illiterate. In occupation highest score, 38 (76%) were working and 12 (24%) were housewife. In monthly income of family, 35 (70%) were having 6001–8000 income per month, 10 (20%) have 8001–10000 income per month, and 5 (10%) having income 4001–6000. In diet, 38 (76%) women eat vegetarian diet and 12 (24%) women eat non-vegetarian diet and. In number of child, 20 (40%) mothers

Table 2: Association between pre-test knowledge scores and selected demographic variables *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$

Demographic variables	Pre-test knowledge score			df	χ^2 value
	Poor (0–6)	Average (7–13)	Good (14–20)		
Age in years					
16–20	2	2	1	6	2.813 NS
21–25	8	18	0		
26–30	2	10	2		
31–35	1	2	2		
Religion					
Hindu	12	32	5		2.9 NS
Muslim	1	0	0	6	
Christian	0	0	0		
Others	0	0	0		
Education					
Illiterate	0	0	0		33.97 S
Primary education	12	3	0	6	
Higher secondary	1	27	4		
Graduate and above	0	2	1		
Occupation					
Housewife	3	6	3		4.0295 NS
Business	0	0	0	6	
Laborer	10	26	2		
Any other	0	0	0		
Monthly income in Rs.					
<4000	0	0	0		5.683 NS
4001–6000	2	2	1	6	
6001–8000	7	26	2		
>8001	4	4	2		
Dietary habit					
Vegetarian	10	25	3	2	0.665 NS
Non-vegetarian	3	7	2		
Number of children in each family					
One	10	5	0		24.045 S
Two	0	13	2	6	
Three	3	14	2		
More than three	0	0	0		

have only one child, 17 (34%) have three children, and 13 (26%) mothers have two children.

Section II – Association between pre-test knowledge score and selected demographic variables

To find the relationship between pre-test knowledge and selected demographic variables, Chi-square test was used. The findings revealed that there is no significant relationship established between age, religion, occupation, monthly income, diet, and pre-test knowledge score. The reason for non-significant relationship with pre-test knowledge score and selected variables may be due to limited sample size, i.e., 50 and purposive sampling technique. The finding revealed that there is a significant relationship between education and number of children in each family.

Educational program through teaching is effective measures in improving the knowledge of mothers as well as other family members. Nurses should consider that it is their prime duty to educate the caregiver regarding care of child at home. Nurses play an important role in the educational program as they have more contact with the patients and family members compared to other health professionals educational program in the hospitals as well as in OPDs or houses in the community should become part of patient care.

Section III – Comparison of the pre-test and post-test knowledge among samples

The self-structured questionnaire was developed by the investigator to assess the effectiveness of planned teaching program among mothers regarding malnutrition.

The pre-interventional knowledge of the samples shows that 32 (64%) of 50 had average knowledge, 13 (26%) had poor knowledge, and 5 (10%) had good knowledge about the malnutrition.

Table 3: Frequency and percentage distribution of pre-test knowledge score of mothers of 6–36-month children regarding malnutrition

Pre-test knowledge score	Frequency	Percentage
(0–6) Poor	13	26
(7–13) Average	32	64
(14–20) Good	5	10

Table 4: Frequency and percentage distribution of post-test knowledge of mothers of 6–36 months of children regarding malnutrition

Posttest knowledge	Frequency	Percentage
(0–6) Poor	0	0
(7–13) Average	7	14
(14–20) Good	43	86

After providing planned teaching program to the mothers then again post-interventional knowledge was assessed, it clearly states that 43 (86%) had good knowledge and 7 (14%) had average knowledge. This means that the planned teaching program was effective to improve knowledge of the mothers of 6–36-month children.

Section IV – Effectiveness of planned teaching program to improve the knowledge

Table 5: Analysis of significant difference between pre-test and post-test knowledge of mothers of 6–36 months of children regarding malnutrition (n = 50)

Test	Mean	Mean difference	t value
Pre-test	9.5	4.56	15.39***
Post-test	14.06		

This Table 5 depicted mean post-test knowledge is 14.06 which is higher than pretest 9.5, the actual gain of knowledge is 4.56 and computed't' value (t_{50}= 15.39) is more than tabled value (t_{50}=1.671) at the level of 0.05 thus indicated highly significant difference.

It can be clearly seen that "t" value was 15.39 which clearly shows that planned teaching program was very effective in increasing the knowledge of samples.

The above findings are supported by the study conducted by Sudha (2008) at Chennai to evaluate the effectiveness of structured teaching program on malnutrition to mothers of malnourished under-five children in a village of Tamil Nadu. After administration of STP regarding knowledge, in the experimental group, in pre-test, 4 (13.3%) mothers only had adequate knowledge. In post-test, 22 (73.3%) mothers had adequate knowledge. In the control group, 18 (60%) mothers had inadequate knowledge in pre-test and 15 (50%) mothers had inadequate knowledge in post-test. The paired "t" test value was 16.51 and it was statistically significant at P = 0.001 level. This revealed that the STP had improved the knowledge.[6]

Conclusion

The finding of this study indicates that planned teaching program on malnutrition appears to be effective in improving knowledge and practice of mothers of 6–36-month children relating to feeding and caring behaviors. Increase in the knowledge definitely showed a positive effect on the health of the child.

Nurses working in the community and hospitals play a vital role in identifying malnutrition in children. They can teach the mothers about the feeding behaviors and prevention and management of malnutrition. More and more research can be conducted to build up the body of knowledge and also for evidence-based practice.

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