Effectiveness Of Structured Teaching Programme on Knowledge Regarding Prevention of Malnutrition Among Mothers of Toddlers

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Abstract— **Background: Malnutrition among under-five children is an important concern for the health authorities in India. Malnutrition in children is widely prevalent in developing countries including India. More than 33% of deaths in 0-5 years are associated with malnutrition. Globally in 2022, 149 million children under 5 were estimated to be stunted (too short for age), 45 million were estimated to be wasted (too thin for height), and 37 million were overweight or living with obesity. The mother is the sole provider of primary care for her child for the first five years of his or her life. Her ability to provide treatment is primarily dictated by her knowledge and understanding of basic nutrition and health care. The numbers would improve dramatically if mothers were made more aware of infant feeding strategies and other health-care practices. Objectives: To evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of malnutrition among mothers of toddlers. Methodology: A quantitative research approach was used to assess the knowledge regarding prevention of malnutrition among mothers of toddler. The research design selected was quasi-experimental one group pre-test post-test design, non- probability convenient sampling technique was used to select 50 mothers of toddler. The study was conducted in selected rural villages at Behta, Lucknow. Results: The pre intervention mean knowledge score was 12.27±3.74 after intervention it was found to be 24.52±3.94 a change of 12.25 in knowledge score was observed which was found to be statistically significant. The calculated "t" value is 16.81 more than the table value 2.56, is highly significant at <0.001 level. Conclusion: The study concluded that Structured Teaching Programme regarding prevention of malnutrition was effective.**

Index Terms—**Malnutrition, Toddler, Mothers**

I. INTRODUCTION

Malnutrition is a general term. It most often refers to undernutrition resulting from inadequate consumption, poor absorption or excessive loss of nutrients but the term also encompasses overnutrition, resulting from excessive intake of specific nutrients. An individual will experience malnutrition if the appropriate amount or quality of nutrients comprising a healthy diet is not consumed for an extended period of time. In subsequent text, the words malnutrition and undernutrition are used interchangeably.

Malnutrition in children is widely prevalent in developing countries including India. More than 33% of deaths in 0-5 years are associated with malnutrition. In children, undernutrition is synonymous with growth failure - undernourished children are shorter and lighter than they should be for their age /height[1].

Malnutrition among children is also a major public health problem in India. Analysis from the third and fourth rounds of the National Family Health Survey data (NFHS-3, NFHS-4) show that the prevalence of underweight (low weight for age) among children <5 years decreased from 42.5% in NFHS-3 (2009–2010) to 35.1% in NFHS-4 (2015–2016). Stunting (low height for age) also registered a decline from 48% in NFHS-3 to 38.4% in NFHS-4. Wasting (low weight for height) increased from 19.8% to 21% for the same period[2].

Globally in 2022, 149 million children under 5 were estimated to be stunted (too short for age), 45 million were estimated to be wasted (too thin for height), and 37 million were overweight or living with obesity.

Nearly half of deaths among children under 5 years of age are linked to undernutrition. These mostly occur in low- and middle-income countries.

The developmental, economic, social and medical impacts of the global burden of malnutrition are serious and lasting, for individuals and their families, for communities and for countries[3].

Children are more susceptible to malnutrition than adults because they have a lower caloric reserve and more nutritional needs per unit of body weight to accommodate growth. Malnutrition may, in the long run, affect the growth and trajectory of cognitive development when taking into account the influence of disease or illness that adds to higher dietary requirements. It follows that the key to avoiding negative consequences is early detection of malnourished children or children who may be at risk for malnutrition[4].

These are some things that have been linked to malnutrition. Food security, mother and child care (fertility rate and maternal literacy), features of the environment and health services, and potential resources (national and domestic income) were factors explaining the variation in the prevalence of malnutrition among children under the age of five in developing countries[5].

Mothers are the foremost providers of primary care for children. Their understanding of essential nutrition and health measures strongly influences the care they provide. The aspects of nutrition knowledge include the proper age for introducing solid foods and the type of solid foods, frequency of child feeding, diet during diarrhea, and the mother's perceptions of her child's nutritional status. Mothers' practical nutrition knowledge is essential for child health outcomes.

II. REVIEW OF LITERATURE

Michael Jeba Arasi A, et.al. (2022) conducted a study to evaluate the effectiveness of structured teaching programme on knowledge of prevention of malnutrition among mothers with under five children. A quasi-experimental approach was adopted with one group pre and post-test design without control group, with non-probability sampling technique in which purposive sampling method was used. Regarding effectiveness of STP, the overall pre-test mean knowledge score is 46.82%, whereas in post-test 82.08 %. There was significant association between the gain in knowledge scores and selected demographic variables with age, education, occupation, number of under five children, Immunization status of the children at 1% level ($p<0.001$)[6].

Meena, Harishankar & Choudhary, Nirbhay & Chaturvedi, Dharmesh. (2023). Effectiveness of Structured Teaching Program on Knowledge Regarding Malnutrition and its Prevention Among Mothers of Under Five Children. Only 64 mothers of under five children were selected as samples based on exclusion and inclusion criteria through non-probability convenient sampling techniques. The mean pre-test knowledge of mothers of under five children was 10.59 ± 2.19, whereas mean post-test knowledge of mothers of under five children was 20.15 ± 1.86. The findings revealed that structure teaching program was statistically effective (t = 36.83* p-value-0.0001*) and the association between pre-test knowledge and selected demographic variables of mothers of under five children such as age ($\chi2 = 9.83$, p-value-0.02*), educational status ($\chi2 = 15.03$, p-value-0.0001*), monthly family income ($\chi2 = 14.16$, p-value 0.002*), and previous knowledge regarding malnutrition ($\chi 2 = 4.89$, p-value-0.02*) were statistically significant[7].

III. OBJECTIVES

1. To assess the existing level of knowledge of mothers of toddlers regarding prevention of malnutrition.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of malnutrition among mothers of toddlers.
3. To find out the association between the pre-test knowledge score of mothers with selected demographic variables.

IV. METHODOLOGY

A quantitative research approach was used to assess the knowledge regarding prevention of malnutrition among mothers of toddler. The research design selected was quasi-experimental one group pre-test post-test design, non- probability convenient sampling technique was used to select 50 mothers of toddler. The study was conducted in selected rural villages at Behta, Lucknow. The data was collected by using self-structured questionnaire. Each sample was explained about the study and its process of the study. Written

informed consent from all the samples was taken before administering tool. The sample took an average of 30 minutes to complete the pre-test. Then 45 minutes structured teaching programme was conducted. Post test was given on 7th day of pre-test. The collected data was analyzed and interpreted by using descriptive and inferential statistics by the help of SPSS software.

V. RESULTS

Section I: Demographic variables of mothers of toddler: It consisted of 8 demographic variables for obtaining personal information from study subjects. The demographic variables include: age, education, occupation, religion, family income, type of family, house condition, types of diet and sources of information.

Section II: Structured Knowledge Questionnaire: It consisted of 30 multiple choice questions regarding prevention of malnutrition. Each question had four options.

Section III- Structured Teaching Programme

Table -1 Frequency distribution of samples based on Socio demographic variables

n=50

Variable	Frequency	Percentage
Age		
< 20	9	18
21-25	27	54
26-30	12	24
> 30	2	4
Educational status		
Illiterate	6	12
Primary education	17	34
Secondary education	22	44
Graduate and above	5	10
Occupation		
Home maker	21	42
Agriculture work	18	36
Government employee	2	4
Private job	9	18
Religion		
Hindu	41	82
Muslim	7	14
Christian	2	4
Others	0	0
Type of family		
Nuclear Family	34	68
Joint Family	14	28
Extended Family	2	4
Family Income Rs. / Month		
<Rs. 5000	2	4
Rs. 5001- Rs. 10000	11	22
Rs. 10001 – Rs.15, 000	14	28
> Rs 15,001 and above	23	46
Type of diet		
Vegetarian	29	58
Non-vegetarian	21	42
Source of Information		
Family members	12	24
Friends	6	12
Mass media	4	8
Health personnel	28	56

The table-1 compares socio-demographic variables of the samples. The majority of participants belonging to 21-25 years (54%), 44% have secondary education, 42% were homemakers, 82% were Hindus, 68% living in nuclear family, 46% sample's family income were > Rs. 15,000/- and above, 58% of samples were vegetarians and 56% received information about malnutrition from health workers.

Table- 2: Evaluate the effectiveness of Structured Teaching Program on Knowledge regarding prevention of malnutrition

n=50

	Mean±SD	Mean Difference	"t" Value	P- Value
Pre-intervention	12.27±3.74	12.25	16.81	0.001
Post-intervention	24.52±3.94			

Table 2 shows that the pre intervention mean knowledge score was 12.27±3.74 after intervention it was found to be 24.52±3.94 a change of 12.25 in knowledge score was observed which was found to be statistically significant. The calculated "t" value is

16.81 more than the table value 2.56, is highly significant at <0.001 level. So, it is concluded that Structured Teaching Programme regarding prevention of malnutrition was effective.

There is no significant relationship between the pre-test knowledge score and selected demographic variables.

VI. DISCUSSION

In the present study it was observed that the pre intervention mean knowledge score was 12.27±3.74 after intervention it was found to be 24.52±3.94 a change of 12.25 in knowledge score was observed which was found to be statistically significant. The calculated "t" value is 16.81 more than the table value 2.56, is highly significant at <0.001 level.

These findings were supported by a study conducted by Poonam Paul & Renuka (2025) conducted a study to Assess the Effectiveness of Structured Teaching Strategy on Knowledge Regarding Prevention of Malnutrition Among Mothers of Toddlers at Block Marh Jammu. This study included 60 samples (mothers of toddlers at Marh block in rural area of Jammu) and adopted a quantitative approach, employing a pre-experimental one-group pretest and post-test design. Participants were selected using a nonprobability convenient sampling technique. Before administration of the structured teaching program, 47 (78.33%) mothers had inadequate knowledge, 13 (21.67%) had moderate knowledge and 0 (0.0%) had adequate knowledge about malnutrition and its prevention, while after administration of structured teaching program, 48 (80%) had adequate knowledge, 12 (20 %) had moderate knowledge and 0 (0 %) had inadequate knowledge about malnutrition and its prevention indicating that the intervention was effective.

VII. CONCLUSION

The study concluded that Structured Teaching Programme regarding prevention of malnutrition was effective.

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