

A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATIONAL BOOKLET REGARDING KNOWLEDGE ON PREVENTION OF MALNUTRITION AMONG THE MOTHER'S OF UNDER FIVE CHILDREN IN SELECTED RURAL COMMUNITY AREA, LUCKNOW, UP

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ABSTRACT: Objectives-To assess the pre-test knowledge score and post-test knowledge score of mothers of under five children regarding prevention of malnutrition and the association between pre-test knowledge score with their socio-demographic variable.

Methodology- Quantitative Research Approach with pre-experimental pre-test post-test research design. The study was conducted in Village Juggaur, Chinhat Block, Lucknow. Purposive Sampling technique was used to select the study subjects. Intervention was given through Informational Booklet. Data was collected from 30 mother's of under five children by using Structured knowledge questionnaire to assess the pre-test and post-test knowledge score.

Results-The pre-test knowledge scores of mother's of under five children (60%) had average knowledge and post-test knowledge scores of mother's of under five children (76%) had average knowledge. There was no significant association between pre-test knowledge scores with their socio demographic variable at level of $p < 0.05$.

Conclusion- Over all finding clarify that informational booklet was effective in enhancing the knowledge of mother's of under five children regarding the prevention of malnutrition.

Keywords- Assess, Malnutrition, Prevention

INTRODUCTION

Malnutrition can be as common in poverty as in wealth, one for the lack of food, the other for the lack of knowledge of food. WHO states that- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health is wealth, world's greatest resource. A healthy future lies in the children of today because they are tomorrow's citizen and leaders. Every child develops and grows at his/her own pace and in his/her own time through reaching the various developmental milestones. Children's growth and development don't occur in a linear fashion, but are influenced by each child's environment, nutrition and parental care. These factors play a critical role in a child reaching his/her full potential.

Nutrition is defined as the process by which animals or plants takes in and utilizes food and substances including ingestion, digestion, absorption, transport and metabolism of nutrient found in food. Essential nutrients include protein, carbohydrate, fat, vitamins, minerals and electrolytes. Nutrition is essential for growth and development, health and wellbeing. Eating a healthy diet contribute to preventing future illness and improving quality and length of life. Physical benefits of proper nutrition are endless, it gives children's the energy to live life to the full, protect against malnourishment, maintain the immune system, prevent obesity, reduces the risk of chronic disease.

The nutritional status of a child is usually described in terms of anthropometry, i.e., body measurement including weight, in relation to age or height, which is reflective of the degree of underweight or wasting of that child. Food is the prime necessity of life, life cannot be sustained without adequate nourishment, and child needs adequate food for growth and development.

Malnutrition refers to deficiencies or excess in nutrients intake, imbalance of essential nutrient or impaired nutrient utilisation. It is a serious condition that happens when the diet doesn't contain right amount of nutrient.

Malnutrition includes under-nutrition in which nutrients are under supplied, under-nutrition can result from inadequate intake, malabsorption, abnormal systemic loss of nutrient due to diarrhea, hemorrhage, infection and it is associated with poverty, social deprivation. Or it may due to over-nutrition arising from excessive intake of nutrients. Malnutrition is a man-made disease. It is a disease of human society. It begins of quite commonly in womb and ends in the grave. Malnutrition among children is often caused by the synergistic effects of inadequate or improper food intake, repeated episode of parasitic or other childhood disease such as diarrhea, improper care during illness. Children under age of five years suffer from a host variety of diseases like diarrhea, respiratory infections, measles, pertussis, polio, tuberculosis and diphtheria due to malnutrition. Malnutrition results from imbalance between the body needs and intake of the nutrients, which can lead to syndromes of deficiency, dependency, toxicity or obesity.

Malnutrition in childhood can also affect growth potential and risk of morbidity and mortality in later years of life. Malnourished children are more likely to grow into malnourished adults who face high tended risk of diseases and deaths. Malnutrition especially among young children is widespread problem in most developing countries. Over 100 million children less than five year of age suffer from protein energy malnutrition, which is usually fatal if untreated malnutrition refers to disorder resulting from an inadequate diet or failure to absorb or assimilate dietary elements. Complication of malnutrition are anemia in children, convulsion, poor mental or cognitive development, stunting. As in prevention of malnutrition, mother's play a vital role. She should have

adequate knowledge regarding care of child, nutrition which they need specially feeding, food serving, in-home medical needs against illness and malnutrition. So, if the mothers have adequate knowledge, then she can raise her children more healthily. According to WHO, breast milk has the complete nutritional requirements that a baby needs for healthy growth and development in the first six months of life.

According to the United Nations Child Emergency Fund (UNICEF), children who are breastfed in the first six months of life have a six times greater chance of survival as opposed to non-breastfed children. Asia and Africa bear the greatest share of all forms of malnutrition, in 2019 it was found that 54% and 40% children are affected respectively. All data used have been taken from UNICEF Regional Office (ROSA) database on nutrition.

Globally in 2020, 149 million children under five were estimated to be stunted (too short for age), 45 million were estimated to be wasted (too thin for height) and 38.9 million were overweight or obese. Around 45% of deaths among children under five years of age are linked to malnutrition. These mostly occurs in low and middle-income countries. At the same time, in these same countries, rates of childhood overweight and obesity are rising.

As India is a developing country, many children under five years are still undernourished. Children under the age of five years constitute a priority group because of their large numbers. In India they comprise about 13% of total population. They are also regarded as vulnerable or high-risk group because of the problems arising during their growth, development and survival. 53% of the deaths are occurring among children during the first five years of life in developing countries including India. Malnutrition is regarded as the most widespread condition affecting the health status of under five children. Approximately 47% of the Indians (under age of five years) children are underweight, one in three adult women in India is underweight and therefore at risk of developing babies with low birth weight. Uttar Pradesh has 3,55,314 severely malnourished children. This accounts for 39.5% of the total malnourished children in the country.

A country needs a well-nourished population of children in order to have a healthy and productive labor force in future, nutritional status of child today reflect a healthy and productive generation in future. Nutritional condition is a critical factor of optimum growth and it should neither be inadequate nor excessive, improved nutrition and health enhance the learning ability of children in the long run it leaves to an increase in the strengthen of the labor force and thereby it contributes positively for the economic growth. Thus, good nutrition is essential for healthy thriving individuals, families and nation.

Statement of the problem

“A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATIONAL BOOKLET REGARDING KNOWLEDGE ON PREVENTION OF MALNUTRITION AMONG THE MOTHERS OF UNDER FIVE CHILDREN IN SELECTED RURAL COMMUNITY AREA, LUCKNOW.”

Objectives of the study

1. To assess the pre-test knowledge score of mothers of under five children regarding prevention of malnutrition.
2. To assess the post-test knowledge score of mothers of under five children regarding prevention of malnutrition.
3. To assess the effectiveness of informational booklet regarding prevention of malnutrition.
4. To find the association between pre-test knowledge score with their socio demographic variables.

Assumptions

Mothers of under five children will have some knowledge on malnutrition.

Operational Definition

Assess: Refers to a measurement of the level of knowledge regarding prevention of malnutrition among mother's of under five children.

Informational Booklet: It refers to enhancing the knowledge of mother's of under five children regarding malnutrition through information booklet.

Knowledge: It refers to the information obtained from the mother of under five children of rural community area regarding prevention of malnutrition as measured by structured questionnaire.

Prevention: It refers to provision of adequate nutrition for maintaining optimum health of under five children by educating mothers of under five children regarding prevention of malnutrition.

Malnutrition: It implies imperfect assimilation or a pathological state resulting from a relative or absolute deficiency or excess one or more essential nutrients.

Rural Community: In this study it refers to mother of under five children residing at selected rural community area.

Hypotheses

All hypotheses were tested at <0.05 level of significance

H1: There would be significant difference between pre-test and post-test level knowledge scores of mothers of under five children on prevention of malnutrition.

H2: There would be significant association between pre-test knowledge scores with their socio demographic variables.

Delimitations

- The study was delimited to mother's of under five children.
- The study was delimited to selected rural community area

RESEARCH METHODOLOGY

Research Approach:

Research approach indicates the basic procedure of conducting the research. Research approach is a technique which the researcher uses to structure a study in order to gather and analyze information relevant to the research question. Quantitative research approach was adopted in the present study.

Research Design:

The research design is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study. In this present study, pre-experimental pre-test post-test design was used.

Variables:

The Variables in present study includes:

Independent Variables: Informational booklet regarding prevention of malnutrition

Dependent Variables: Level of knowledge regarding prevention of malnutrition among mother's of under five children.

Hypotheses:

All hypotheses were tested at <0.05 level of significance.

H1: There would be significant difference between pre-test and post-test level of knowledge scores of mother's under five children on prevention of malnutrition.

H2: There would be significant association between pre-test knowledge scores with their socio demographic variables.

Setting of study:

The present study was conducted in Juggaur, Chinhat Block, Lucknow District Uttar Pradesh. In this present study, Juggaur is a village in Chinhat Block, Lucknow district, Uttar Pradesh, India is selected. In previous survey (2020), population is 24,798, 12,914 male, 11,884 female and population density were 1,810 people/km². The selection of the area was done on basis of geographical proximity, feasibility for conducting study and availability of samples. In this village we are familiar with the population and place.

Population:

Population is the aggregation of all units in which a researcher is interested. In the present study, populations constituted to the mother's of under five children.

Sample and Sample size:

Sample: Representative unit of a target population selected by researcher to participate in the research study. In this present study; the samples were mother's of under five children residing in Juggaur village.

Sample size: This study comprises of 30 mother's of under five children.

Sampling technique: Sampling technique is the process of selecting a representative part of the population. Selection of subjects for present study was done by purposive sampling technique. All the subjects who fulfilled the inclusion criteria were included in the research study and available at the time of data collection were selected for the study.

Sampling criteria:

Inclusion criteria:

1. Mother's having only two children of under five age.
2. Mother's who can read and understand.
3. Mother's who were literate.
4. Mother's residing in selected rural community area.
5. Mother's who are available at the time of data collection.

Exclusion criteria:

1. Mother's who were suffering from any chronic, physical or mental illness.
2. Mother's who were not willing to participate in study.

Description and development of tool:

Data collection tools are procedure or instrument used for gathering and analyzing data in a research investigation.

Tool is divided into two:

Tool A: Demographic variables consist of age in years, educational status of mothers, religion, occupation of mother's, type of family and no. of children.

Tool B: Structured knowledge questionnaire were used to assess the knowledge of mothers of under five children.

Knowledge score remarks are:

Knowledge score	Criteria
1-8	Poor
9-16	Average
17-25	Good

Content Validity:

The tools were validated from experts. The experts are requested to various departments which include one from Department of Pediatric and Neonatal unit and Midwifery and Obstetrical Nursing. The selection of experts was based on their work experience and clinical expertise. Modification given by experts was done in tools.

Ethical consideration:

The proposed study was conducted after taking administrative permission from Principal of Sahara College of Nursing and ethical permission obtained from Sarpanch and Pradhan of village. After explaining the purpose of the study, written consent was taken from mother's of under five children. They were informed that finding will be kept confidential and they can withdraw their names from the study at anytime whenever they find difficulty or inconveniences.

Data collection process:

Data collection was started on 04/03/2022. Informed consent from the participants was taken. Pretest was conducted through structured knowledge questionnaires. Intervention was given by informational booklet to mother's of under five children. Post-test was conducted after 7 days.

Plan for data analysis:

Data analysis was done according to objectives and hypotheses of the study by using descriptive and inferential statistics. A master sheet was prepared based on responses given by the participants. following test were done for analyzing the data

- Frequency, percentage
- Mean, median, SD, Paired 't' test
- Chi – square.

Analysis and Interpretation**SECTION –A****Socio Demographic variables of Participants:-**

Table no. 1- Frequency, Percentage distribution of socio demographic variables of mother's of under five children:

S.No.	Characteristics	Frequency	Frequency (%)
1	Age Below 20 years 21-24 years 25-30 years Above 30 years	0 12 16 2	0% 40% 53.3% 6.6%
2	Educational status Primary level Secondary level Undergraduate Postgraduate	12 14 3 1	40% 46.6% 10% 3.3%
3	Religion Hindu Muslim Sikh Christian	30 0 0 0	100% 0% 0% 0%
4	Occupation Housewife Working Vocational Side business	30 0 0 0	100% 0% 0% 0%
5	Types of family Joint Nuclear	24 6	80% 20%
6	No. of children 1 2	12 18	40% 60%

Table no.1- Revealed that more than half of mother's of under five children were (53.3%) between age group of 25-30 years. Most of the mother's of under five children (40%) were between age group of 21-24 years. Only (6.6%) mother's above 30 years of age. Most of mother's of under five children (46.6%) were having education of secondary class, most of mother's of under five children (40%) having primary education, (10%) having undergraduate level education status, only (3.3%) having education status of postgraduate level. All mother's (100%) were Hindu religion. All of mother's (100%) were housewife. Most of mother's (80%) were from joint family and only (20%) were from nuclear family. More than half of mother's (60%) were having 2 children and only (40%) were having 1 child.

SECTION - B**Effectiveness of Informational Booklet on prevention of malnutrition:-**

Table no. 2- Frequency, Percentage distribution of knowledge score of mother's of under five children:

OBJECTIVE: To assess the pre and post knowledge score of mother's of under five children.

S.NO.	Remarks	PRE-TEST		POST-TEST	
		Frequency	Frequency%	Frequency	Frequency%
1	Poor	8	26.6%	1	4%
2	Average	18	60%	23	76%
3	Good	4	13.4%	6	20%

Table no. 2- This table illustrated that in pre-test knowledge score 60% (18) of mother's of under five children had average knowledge, 26.6% (8) of mother's of under five children were having poor knowledge and only 13.4% (4) mother's of under five children had good knowledge where as in post-test knowledge score 76% (23) of mother's of under five children had average knowledge, 4% (1) of mother's of under five children were having poor knowledge and only 20% (6) mother's of under five children had good knowledge.

SECTION-C**Effectiveness of informational booklet on prevention of malnutrition:-**

Table no. 3- Comparison of pre and post-test knowledge score on prevention of malnutrition:

OBJECTIVE: To compare the effectiveness of pre- test and post-test knowledge score regarding prevention of malnutrition.**H1:** There would be significant difference between pre-test and post level of knowledge scores of mother's of under five children on prevention of malnutrition.**N=30**

Tests	Mean \pm SD	't' value Calculated value	p value Tabulated value
Pre-test	11.33 \pm 4.07	5.09	2.04
Post-test	14.13 \pm 3.08		

level of significance <0.05 , $t_{30}=2.04$

Table no. 3- This table illustrated that mean and standard deviation of mother's of under five children in pre-test was 11.33 \pm 4.07 whereas in post-test it was 14.13 \pm 3.08. Independent 't' test was performed to find the difference between pre-test knowledge score and post-test knowledge score of mother's of under five children. The calculated 't' value was 5.09 which was higher than the tabulated value 2.04 at <0.05 level of significance. Hence the null hypothesis was rejected and research hypothesis was accepted. Thus, it can be inferred that the information booklet was effective in prevention of malnutrition among children of under five age group.

SECTION- D**Association between pre-test knowledge score with their selected socio demographic variables:-**

Table no. 4- Association between pre-test knowledge score with their selected demographic variables:

OBJECTIVE: To assess the association between pre-test knowledge score with their socio demographic variable.**H2:** There would be significant association between pre-test knowledge scores with socio demographic variables.**N=30**

S.No.	Characteristics	Median \leq 12	Median \geq 12	χ^2
1.	Age			0.215
	20-24 years	7	5	
	25 and above	12	6	
2.	Educational Status			0.354
	Primary education	17	9	
	Graduate	2	2	
3.	Religion			0
	Hindu	19	11	
	Muslim	0	0	
4.	Occupation			0
	Housewife	19	11	
	Working women	0	0	

5.	Type Of Family Joint Nuclear	16 3	8 3	0.574
6.	No. Of Children 1 2	7 12	5 6	0.215

$P < 0.05 = 3.84$

Table no. 4- Showed that there was no significant association between pre-test knowledge score with their socio demographic variable at $P < 0.05$ level of significance.

SUMMARY:

Data were analysed according to the objectives of the study. Analysed data were presented in the form of tables. The presentation was described in empirical and justified manner.

DISCUSSION

OBJECTIVE 1 – To assess the effectiveness of Informational booklet regarding prevention of malnutrition.

In our study it is illustrated that mean post- test score and standard deviation of mother's of under five children in pre-test was 11.33 ± 4.07 whereas in post-test it was 14.13 ± 3.08 . Independent 't' test was performed to find the difference between pre-test knowledge score and post-test knowledge score of mother's of under five children. The calculated 't' value was 5.09 which was higher than the tabulated value 2.05 at < 0.05 level of significance. Thus it can be inferred that the information booklet was effective in prevention of malnutrition among children of under five age group. Hence the null hypothesis was rejected and research hypothesis is accepted. Thus it can interpret that effectiveness of information booklet in post-test knowledge score was not by chance but it was due to intervention.

OBJECTIVE 2 –To find the association between pre-test knowledge score with their socio demographic variables.

In present study, it was found that there was no significant association between pre-test knowledge of mother's of under five children and their socio-demographic variable at the level of significance $p < 0.05$

CONCLUSION:

REFERENCES

BOOK REFERENCES:

1. Dorothy R. Marlow, Barbara A. Redding, 6th ed; Textbook of Pediatric Nursing, Elsevier Publication, P 674-680 (2017).
2. Basavanthappa B.T. Pediatric child health nursing, 2nded; Ahuja Publishing house, P 149 (2006).
3. Dutta.P. Pediatric nursing, 2nded; Jaypee Brothers Medical Publisher, P 64-65, 202-217 (2000).
4. Ghai. O.P, Essential pediatric, 4thed; Jaypee Brothers Medical Publisher, P 101-107 (2004).
5. Basavanthappa B.T. Community health nursing, Jaypee Publication, P 264-265, 526 (2008).
6. Park. K, Textbook of preventive and social medicine, 25thed; H/S Banarasidas Bhanot Publisher, P 472 (2007).
7. Suresh K. Sharma, 3rded; Nursing Research and Statistics, Elsevier Publication, P 455-462, 504-505, 537, 548, 551 (2017).
8. Prabhakara. G.N, biostatistics, 1sted; Jaypee Brothers Medical Publisher, P 322-323, 304-305 (2006)
9. Sunder Rao. P.S, An Introduction to Biostatistics, 3rded; Prentice Hall of India P. Ltd, P 203- 210 (1900).
1. Chaudhary P; Kaur R. Prevalence of protein energy malnutrition among under five children, Journal of emerging technology and innovative research January 2022;7(9).
2. A R Bharathi, A study to assess the level of knowledge regarding malnutrition among mothers of under 5 children at selected area of Guduvanchaery, Journal of research in Medical and Dental science, 2021;9(12).
3. Chetan Bharmu Ambupe, "A descriptive study to assess the knowledge regarding malnutrition among mothers of under five children in selected area of Ratnagiri city", Internal journal of science and research 2020;9(7).
4. Patil S. Knowledge regarding malnutrition and its prevention of malnutrition among mothers of under five children, International journal of scientific research, June 2019;7(9).
5. Ashok Midhun, Mohammed Taj, International journal of advance research idea and intervention in technology 2019;5(4).
6. Chetan S. Patali, Department of psychiatric nursing, Rajiv Gandhi University Of Health Sciences, research article, April 2018;7(4).
7. Manohar. B, Surrender Reddy, Assessment of knowledge, attitude and practice of mother with severe malnutrition children regarding child feeding, International journal of pharmaceutical and clinical research 2018;10(5): 150-154.
8. Bhardwaj R, Dutt R, Knowledge of mothers under five children on malnutrition, International journal of science and research, 2017;5(7).
9. Isarannaver G S, Sannashivannanavar R S, effectiveness of structured teaching programme on malnutrition intervention, International journal of science and healthcare research 2017;2(2),42-45.
10. Alka Mishra, Urmila D. Bharadwaj, Knowledge regarding malnutrition and its prevention, International journal of nursing and midwifery research 2017;4(2).
11. Vaidya P, Raj N, A study to assess the knowledge of mothers regarding comprehensive nursing intervention in prevention of under 5 malnutrition, International general of scientific research, 2016;5(5).

12. Ansuya, Nayak B S, Mothers knowledge on malnutrition: Community based cross-sectional study, Indian journal of public health research and development 2016;9(1).
13. M. kavitha, To assess the knowledge of mothers regarding malnutrition, Journal of nursing and health science, august 2015;4(6).
14. Vinod V. Bagilkar, B. savadatti, A descriptive study on malnutrition, Asian Journal of Nursing Education And Research, 2015;7(4).
15. Darshan Bevoor, Sangeeta Moreshwar, A study to evaluate the Effectiveness of planned teaching programme on knowledge on prevention and control of malnutrition among mother's of under 5 children, International journal nursing education and research September 2015;3(3).
16. Sijokoshy, R. Thapa, Effectiveness of structure teaching program on knowledge regarding prevention of malnutrition among mother's of under 5 children Indian journal of Research 2015;4(10).
17. SD. Asmantunnsia, Effectiveness of information booklet knowledge regarding malnutrition among mother's of under 5 children, Management nursing journal 2014;4(5) ;16-18.
18. Divya Shettigar, Reena J. Thomas, Assessment of under 5 children on nutritional problems: rural based community study, National general of community medicine, 2013;4(1) page no :141-147.
19. M. Edith. Knowledge, Attitude and practice survey on dietary practices in prevention of malnutrition among mothers of under 5 children, Manipal, Journal of nursing and health sciences 2011;2(2).
20. Yadav S. Knowledge and practices regarding prevention of protein energy malnutrition among mother's of under 5 children, Asian journal of nursing education and research 2010;6(1).

NET REFERENCES:

- 1 www.who.int/features/qa/malnutrition.
- 2 Malnutrition; Prevention of malnutrition-GOOGLE.
- 3 <https://www.medicalnewstoday.com/articles/179316.php>.
- 4 www.foodqualityandsafety.com/articles/five-essential-tips-for.
- 5 <http://www.unicef-irc.org>.

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