A study to assess effect of nutritional supplement on malnutrition among children of selected areas

Surekha Suryavanshi and Swheta Joshi

Abstract

Introduction: Globally, more than one third of under-five deaths are attributable to under-nutrition. About 20 per cent of children under-age five in India are wasted, 43 per cent underweight and 48 per cent shunted. In terms of numbers about 34 million children under five years in India are underweight which constitutes about 37 percent of the total underweight children in the world.

Methods research approach

Research Approach: Evaluative approach. Research design used was Pre experimental, pre test & post test one group design. Conceptual framework based on Rosentohlch’s & Becker’s Health Belief Model (1953). The setting for this study was the selected areas of the Dr. D.Y Patil Hospital and YCM Hospital for the study. Children of 1 to 5 year of age malnutrition children admitted in hospital PCMC Pune. The purposive sampling method was used for selecting 30 sample. The tool developed which includes, Section I: Section I-Socio-Demographic data Section II-Structured interview schedule dietary practice. Section III-Observational Check list for malnutrition. Section IV-Detials of Nutritional supplement. Tool for assess the knowledge using structured questionnaire and Fisher’s Exact Test’ would be applied to determine the significance of findings.

Tool validity was done and tool found reliable. Study found feasible after pilot study.

Results: Research design selected for this study is Pre experimental, pre test & post test one group design. Sample was collected through the use of Purposive Sampling Technique. The reliability was done by integrator method Calculation was done by Guttmann correlation formula and reliability coefficient of tool was 0.9, which was found to be Reliable. Section II–90% of the under five children were have moderate malnutrition.43.3% of them had calorie intake below 1100. Section III-paired t test for comparison of pretest and post test weight of under five children. Average weight on day1 was 12.6 kg which increased to 12.9 by the end of nutrition supplement. T-value for this comparison was 9.1 Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. Section-IV-The p-values are large (greater than 0.05), there is no evidence against null hypothesis. None of the demographic variable was found to have significant association with calorie intake of under five children. The content validity was determined by experts.

Conclusion: Malnutrition which showed that analysis of pre test and post test weight of under five children. Average weight on day1 was 12.6 kg which increased to 12.9 by the end of nutrition supplement.

Keywords: nutritional supplement, malnutrition, children

Introduction

One in four severely malnourished children died during treatment; however, mortality rates varied between centres from 5% to 50%, a variation that was mainly due to differences in treatment practices. The centres where mortality was low followed a basic set of principles that implemented treatment in stages and addressed clinical problems in a considered order. To try and improve identification and treatment of SAM, WHO introduced guidance in 1999 that provided a 10-step ordered approach through three phases. The guideline takes into account the profound physiological and metabolic changes (Reductive adaptation) that have taken place in severely malnourished children, which means that they have to be fed, rehydrated and managed differently from well nourished children.

Research design

The research design selected for the study was an Pre experimental, pre test & post test one group design.
Research setting
The present study was conducted in the selected Dr. D Y Patil Hospital and YCM Hospital.

Population
The population of the present study comprised of under 5 children of malnutrition.

Sample
In the present study the samples are 1 to 5 year of age malnutrition children.

Sample size
The Sample size consisted of 30, under 5 children of malnutrition.

Sample technique
In the present study the sample was collected through Non probability Purposive Sampling Technique.

Criteria for selection of sample
Inclusion criteria
1. Children who are under five children age with malnutrition.
2. Parents who are willing to participate in this study.

Exclusion criteria
1. Critically ill child.
2. Children who are on Nasogastric feeding.
3. Children who can not eat by mouth.

Development of tool
Consisted in Demographic data consist of data of mother such as Name, Age, Gender, Religion, Income, Family History etc. & child data gender, age, birth weight child birth order, nutritional status, presence of health problem. Structured interview schedule dietary practice. Observational Check list for malnutrition. Details of the Nutritional supplement. Opinions and suggestions were taken from the experts, which helped in determining the important areas to be included.

Description of the tool
In this study the tool consisted of:

Section A: Demographic Performa

Section B: Consisted of Structured Interview Schedule Dietary Practice.

Section C: Consisted of Observational Check List for Malnutrition.

Section D: Details of Nutritional Supplement.

Validity
The tool was valid by 15 expert from paediatric nursing which included the five paediatric nursing and 4 of Doctors of paediatric Department 2 community nursing department &2 dietician and 1Staticians. The suggestions were given in section III that is malnutrition grade can be assessed as per WHO. They were requested to give their opinion on the appropriateness& relevance of items in the tool.

Reliability of the tools
The reliability was done by integrator method Calculation was done by Guttmann correlation formula and reliability coefficient of tool was 0.9, which was found to be Reliable. and so it is found to be highly significant, hence the tool was reliable.

Ethical consideration
• Researcher had obtained approval from appropriate review boards to conduct the study.
• Researcher had taken formal permission from mothers of children’s to conduct study.
• Only the samples who had signed the consent form are included in the study.

Plan for data collection
• Ethical committee clearance
• Permission from the Corporator and Medical Officer of selected areas.
• Consent from nurses from selected areas.
• The investigator approached the nurses of selected samples, informed them regarding the objectives of the study and obtained their informed consent after assuring the confidentiality of the data.

Pilot study
5 sample that meet inclusion criteria, Sample selected by the purposive sampling technique were assured about confidentiality of the information collected. Data was collected and pre assessment was done measure the child Weight, Height, Mid arm circumference, Head circumference, Chest circumference. After that provided the paushthic ladoo After 7 days post Assessment done. After test the data was analyzed with the help of descriptive and inferential Statistics. The pilot study shows that this study is feasibility.

Data analysis and interpretation
Section I: Description of the children according to their demographic Variables.

Section II: Description of malnutrition among children.

Section III: Description of dietary practice among children

Section IV: Description of effect of nutrition supplement on malnutrition

Section V: Description of association between dietary practice and malnutrition status with selected demographic variable of children. For the analysis of demographic variable would be analyzed in terms of frequency and percentage was be calculated. Mean, Median, Mode, Standard deviation, Percentage, Distribution, Frequencies for assess the effects.

Result
Section I: Frequency and percentage distribution of selective demographic variables
Majority (4%) of the subjects were in the age group of 21-29 years followed by (36%) were in the age group of 30-39 years, (34%) were in the age group of 40-49 years. followed by (26%) were in the age group of 50-49 followed by (26%) were in the study group. B. Data shows that
majority (4%) of the subjects were males and (96%) of them were females. C. Majority (0%) of subject were ASHA workers, (4%) were Health assistant. Majority (96%) of subject were Multipurpose workers, (04%) of them were Health assistant. any other (0%). D. Majority of (14) of subject have less than 1 year of experience, (28%) less than 5 years of experience, (20%) of them have less than 10 years of experience,(8%)less than 1 years of experience, and (44%) have15years and above years of experience as community health workers. E. Majority (64%) of subject has exposure to information on adolescent health and (36%) not exposure to information on adolescent health. G. Data shows that 32 cases of them had heard of adolescent’s health before. Information from co-professionals.

Section II: Distribution of Knowledge regarding preparation. Assess the pre and post test knowledge score regarding adolescent health in study group. Assess the pre and post test knowledge score regarding adolescent health in study group.

Section III: comparison of pre and post test knowledge score in study group.

Section IV: Area wise comparison of pre and post test knowledge score in study group. Showing area wise comparison of pre and post test knowledge score in study group. Analysis of data related to the association of the knowledge of community health workers regarding adolescent health with selected demographic variables. Comparison of pre and post test knowledge score according to Previous exposure to information on adolescent health in study group.

Conclusion
The findings of the present study indicated that subjects had inadequate knowledge score regarding adolescent health in the pre-test. After the Planned Teaching Programme their knowledge score had increased in the post-test. Hence the Planned Teaching Programme on adolescent health was effective in rendering knowledge and bringing awareness in community health workers.

Discussion
Research methodology adopted for the study and includes detailed description of research approach, research design, variables, setting of the study, sampling technique, sample size, sample inclusion and exclusion criteria, data collection tools and techniques, tool preparation, feasibility of the study, pilot study, reliability, validity, data collection, method of data collection and plan for data analysis.

Limitations
- Data collection period was limited to 4 weeks
- The data was collected only through the baseline data and a Questionnaire. The study was conducted to only one group 30, under 5 children of malnutrition
- Internal validity as the Investigator had no control over the events that took place between the test and re-test.

Recommendations
1. A similar study may be replicated on large samples.
2. A similar study can be carried out on larger samples to make generalizations.
3. A comparative study can be done between urban and rural community health workers.
4. A study can be done to assess the effectiveness of information booklet regarding knowledge on adolescent health among the community health workers.
5. A similar study can be done among high school teachers and the parents of adolescent.

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References