

COMPARISON OF NUTRITIONAL STATUS BEFORE AND AFTER INTERVENTION AMONG MOTHERS OF CHILDREN WITH MALNUTRITION

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ABSTRACT

The purpose of this research was to examine the impact of several nursing treatments on the knowledge of mothers and the nutritional health of children younger than five. The nutritional condition of children improved as a result of some nursing treatments that raised parents' awareness. Children suffering from severe malnutrition benefited greatly from nutritional supplementation. The study's aims were to compare the nutritional status of children who had been identified as malnourished before and after receiving selected nursing interventions, to determine whether or not there was a correlation between the mothers' awareness and the children's nutritional status, and to determine whether or not the post-test finding was associated with the mothers' awareness.

KEYWORDS: Malnutrition, Under-five Children, Mothers, Prevalence, Awareness, Nutritional status, Nursing Interventions.

INTRODUCTION

The nutritional status of children is anticipated to improve with the appropriate application of knowledge and skill obtained from any source of information linked to nutrition. The impact of nutrition education on moms with no formal education is seldom examined in the scientific literature. People's habits and routines may be shaped by their level of education, knowledge, and expertise. Children's nutritional condition varies even among households of a comparable socioeconomic position and access to resources. This demonstrates that the primary cause of children's dietary issues is not a lack of resources. The development of a kid depends in large part on the quality of care he receives in his first years. According to the International Conference on Nutrition, the actions of caregivers create a healthy environment for children.

In order to better nourish their children and toddlers, moms might benefit from nutrition education programs. Nutritional education is provided by many health professionals to assist moms and their children avoid stunting. Low economic circumstances are a contributor to maternal malnutrition. Stunting may occur when basic requirements, such prenatal nutrition, are unfulfilled.

Malnutrition may be caused by a mother's poor diet during pregnancy, and persistent malnutrition in newborns and toddlers can lead to serious health problems. Children's nutritional status is largely determined by what their mothers eat, particularly when they are pregnant. Stunting is a result of long-term malnutrition caused by inadequate dietary intake. Mothers are essential in the home and play a crucial part in child rearing. Helping newborns and toddlers grow and develop normally and warding off illness all depend on moms getting the nourishment they need.

LITERATURE REVIEW

Hussein, Yasser & Mohammed, (2016) Malnutrition and illness go hand in hand. Malnutrition may either cause illness or be one of its symptoms. According to the United Nations Standing Committee on Nutrition (SCN), malnutrition is the leading preventable cause of death worldwide. The model defines the causes of malnutrition as barriers to receiving enough nutrition, healthcare for mothers and children, and other basic necessities. The development of children is affected by several variables.

Sharma, Arvind & Yadav (2015) In developing nations, malnutrition remains a critical issue for public health. India has one of the worst rates of child malnutrition in the world, making it a major public health concern. The primary objective of this research is to compare rates of under-5 malnutrition in urban and rural areas of Rajasthan, India. The influence of demographic, health, and socioeconomic variables on malnutrition is also a major focus. In addition, a thorough literature analysis revealed that the current study would be the first of its sort in Rajasthan, highlighting the importance of doing this research. The goal of this study is to determine the frequency of malnutrition and to investigate possible causes. Jhalawar district children (ages 6-59 months) participated in cross-sectional research in the community. Participants were chosen for the research using a multistage sampling strategy. Results were compared between stunting, wasting, and underweight using the odd's ratio (O.R) correlation coefficient in R, V.3.1.0, and logistic regression was performed using a probit model in STATA V.12.0 for categorical variables. The survey found that 54 percent of kids were short for their age, 84 percent were underweighted, and 63 percent were emaciated. Birth weight, exclusive breast feeding (EBF), and family income were shown to be the most influential variables in preventing stunting, wasting, and underweight. Wasting, underweight, and stunting were all shown to have a significant association impact. Children between the ages of 6 and 59 months still face a significant risk of malnutrition. As a result, combating malnutrition should be a top priority. Indian Society for Preventive and Social Medicine, 2015.

Shenoy, Anita & Baravakar, Jalindar & Shinde, D. (2020). Despite India's rapid economic expansion over the last two decades, the country has failed to make sufficient headway in its fight against hunger and malnutrition. The study's goals are to (1) ascertain the frequency of malnutrition in children aged 6 months to 5 years; (2) identify the socio-demographic, environmental, and other variables related with acute malnutrition; and (3) provide useful guidelines based on the data collected. Topiwala National Medical College's rural field practice location was chosen for the research. Children aged 6 months to 5 years old made up the study population. The research was an epidemiological cross-sectional description conducted in a local community. The survey found that 56.30 percent of the children in the region were underweight, 52.96 percent were stunted, and 27.8 percent were wasting. The vast majority of the local youth were Hindu (96.7%). Children from class IV of the socioeconomic class (Modified B.G. Prasad) make up the vast majority. The most kids were between the ages of 25 and 36 months old (28.15 percent). Children made up 67.78% of all households. Roughly 79% of moms had completed elementary school or above. Female children may take heart from the fact that the prevalence of all three types of malnutrition, namely underweight, stunting, and wasting, was somewhat higher among male children. Children's diets are lacking in calories, proteins, and minerals, despite the fact that the literacy rate is high.

Wangsarkar, Sneha & Sahu (2021) Twenty-one percent of India's population is made up of young adults. Adolescent undernourishment is a major health risk for the majority of boys and girls in impoverished nations. The purpose of this study was to evaluate the socioeconomic and clinical variables related with undernutrition among adolescents in selected schools in metropolitan Puducherry, India. Substances and Techniques: Adolescents (10-18 years old) from a sample of Urban Puducherry's public schools participated in a cross-sectional, analytical research. The information was gathered via the use of semi-structured, pilot-tested surveys. The data was gathered in 2019 from September to October. AnthroPlus was used to analyze the prevalence of malnutrition based on WHO-recommended height-for-age and body mass index-for-age thresholds. A total of 499 participants were analyzed, including 144 (28.9%) males and 355 (71.1%) females. There was a 46.8% incidence of malnutrition (95% CI = 42.4-51.3). A total of 33.3% of the population was undernourished (21.6% were stunted and 15% were underweight). There was a 10.2% rate of overweight individuals and a 5.8% rate of obese individuals. Known risk variables including as socioeconomic position and parental education were not substantially related with undernourishment, however male gender was shown to be an independent risk factor (annual percentage rate = 1.4; 95% CI: 1.0-1.9). Conclusions: Adolescent malnutrition affected one in two students. Over-nutrition was also reported often, despite the significant frequency of under-nutrition. The prevalence of malnutrition may be reduced if parents and students are taught how to track their children's development and make healthy food choices.

Bajwan, Deepika & Sanjenbam, Emon. (2022). The goal of this study is to determine the nutritional condition of children under the age of five, classify them into different levels of malnutrition, and analyze the efficacy of an awareness program on mothers' knowledge and practice of preventing and treating their children's malnutrition. The study employed an experimental research design to determine how well the Malnutrition Awareness and Prevention Program worked. The research used a pre-experimental, one-group, pre- and post-test design. Muslim Basti, Nunawala, Doiwala Block, Dehradun, was the site of the research. Participants were chosen for the research using a combination of simple random selection and sequential sampling. The Structured Knowledge Questionnaire and the Self-reported Practice Check list were used to gather information from 70 mothers and their 102 children less than five years of age. The results showed that 61% of the 102 youngsters evaluated for their nutrition had at least one indicator of malnutrition. Out of every 100 people, 41.17 were underweight, 35.29 were fading away, and 40.19 were stunted. This research reveals that maternal education and behavior have improved dramatically. Pretest knowledge scores were significantly correlated with children's dietary state. Researchers concluded that moms of children less than five years old benefited from the awareness program by learning more about malnutrition and how to treat it.

RESEARCH METHODOLOGY

The research design is the overall strategy for collecting and analyzing data in a study. The layout makes it possible for researchers to hone down on the most effective research techniques for their specific field and launch productive projects. It is the overarching approach used while conducting the study. It's the plan of attack for any investigation. The mothers and young children in the areas around the Primary Health Centre in the Ernakulam Tehsil in Kerala were the subjects of this study. A

researcher's target population is the whole group or subset of the population they want to study. That's the population the study is focusing on, by the way. A sample size of 150 children under the age of five was calculated using a single percentage calculation, with a 95% confidence interval (CI), 8% margin of error (d), and a 10% non-response rate. Children in the age range of two to five from the villages of Ernakulam Tehsil, Kerala will make up the first sample for this research. There was a total of 150 persons. Children under the age of five who would be diagnosed with mild, moderate, or severe malnourishment were included in the Phase II sample, which consisted of 100 mothers. Two- to five-year-olds were included. Women who have given birth to children who have been diagnosed with mild, moderate, or severe malnutrition. Young people who are battling long-term health problems. toddlers and preschoolers (0-1.11 years old). Mothers' knowledge score was compared to children's nutritional status using an analysis of variance. Karl Pearson's correlation coefficient test was used to examine the relationship between mothers' levels of education and their children's nutritional health. Chi-square analysis examined the correlation between mothers' post-test knowledge and child malnutrition and socioeconomic factors, and between children's post-test nutritional status and socioeconomic factors.

DATA ANALYSIS

Using a structured knowledge questionnaire and an anthropometric assessment instrument, we gathered information from 100 mothers of children under the age of five with mild, moderate, and severe levels of malnutrition from chosen villages near the main health center in Ernakulam, Kerala. Descriptive and inferential statistics were used to examine the data.

Distribution of samples before and after intervention among children with severe, moderate, and mild malnutrition is discussed in this section. Range, mean, median, and standard deviation along with mean percentage of nutritional status are provided to summarize the data.

Table 1 Range, mean, standard deviation and median of nutritional status of children with severe malnutrition before and after intervention. (Nutritional supplementation)

	Range	Mean	SD	Median
Pre-test	10.41-11.89	11.59	0.40	11.72
Post-test	10.75-12.21	11.72	0.40	12.06

The pre-test range, mean, standard deviation, and median knowledge scores of children with severe malnutrition are shown in the table below: 10.41-11.89, 11.59, 0.40, and 11.72, respectively. The range of scores on the subsequent exam was 10.75–12.21, with a mean, SD, median, and mean percentage of 11.72, 0.40, and 12.06. Weight increase and enhanced nutritional status were therefore achieved as a result of the nursing treatments (STP and nutritional supplements).

Table 2 Range, mean, standard deviation and median of nutritional status of children with moderate level before and after intervention.

	Range	Mean	SD	Median
Pre-test	12.00-14.93	13.26	0.84	13.15
Post-test	12.06-14.92	13.60	0.90	13.53

Children with moderate malnutrition had a pre-test knowledge range of 12.00-14.93, an intervention mean of 13.26, a standard deviation of 0.84, and a median score of 13.14. The range of scores on the follow-up exam was 12.06–14.92, with a mean, SD, median, and mean percentage of 13.60, 0.90, and 13.53. Children with mild malnutrition improved, according to the findings. Weight increase and enhanced nutritional status were therefore achieved as a result of the nursing interventions (STP).

Table 3 Comparison of nutritional status before and after intervention among mothers of children with severe malnutrition

	Mean	SD	Repeated measure ANOVA (F value)	p value
Pre-test	11.59	0.40	1.231	0.306 (NS)
Post-test	11.61	0.35		

Mean (with standard deviation) before the exam was 11.59, and mean (with standard deviation) after the test was 11.61. The results of the analysis of variance (F value) are inconclusive (F = 1.231, p = 0.306). Therefore, moms whose children are severely malnourished see an increase in their children's nutritional status between the pre and post test scores.

Table 4 Comparison of nutritional status before and after intervention among mothers of children with moderate malnutrition

	Mean	SD	Repeated measure ANOVA (F value)	p value
Pre-test	13.26	0.84	177.084	<0.001***
Post-test	13.55	0.84		

The data in the table above show that both the pre- and post-test means were 13.55 (SD 0.84) and 13.26 (SD 0.84), respectively. The F value for analysis of variance (at the 0.001 level) is 177.084. Therefore, moms whose children are somewhat

malnourished see an increase in nutritional status between the pre- and post-test scores.

Table 5 Comparison of nutritional status before and after intervention among mothers of children with mild malnutrition

	Mean	SD	Repeated measure ANOVA (F value)	p value
Pre-test	7.50	0.82	1264.094	<0.001***
Post-test	7.72	0.82		

The data in the table above show that the average score on the first post-test was 7.72, with a standard deviation of 0.82, while the average score on the second was 7.50. The F value for analysis of variance (0.001 level) is 1264.094. Therefore, moms whose children are somewhat malnourished see an increase in nutritional status between the pre- and post-test scores.

The relationship between mothers' levels of education and their children's health and nutrition is discussed here. Calculations for the correlation were made using Karl Pearson's formula.

Formula for Karl Pearson's coefficient of correlation

$$r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2 \sum(y-\bar{y})^2}}$$

Mothers' Knowledge Score = x.

Table 6 Correlation between knowledge score of mothers and nutritional status of children

Range	Mean	Standard deviation	r value	p value	Type of correlation
Knowledge score	27.94	2.47	0.422	0.004*	Moderate positive
Nutritional status	7.03	1.69			

The table above shows that there is a modest positive link between mothers' knowledge scores and their children's nutritional status (r= 0.422). Significant (p<0.05) association was found. Changes in the children's dietary status were positively associated with gains in academic achievement.

CONCLUSION

This chapter is the researcher's attempt to provide context for her results by drawing on prior research and her personal experiences. She also detailed the study's many shortcomings and consequences for nurses. Therefore, the results of this study will serve as a roadmap for future students to conduct in-depth research on the subject of malnutrition prevention and compare their findings. The study's aims were to compare the nutritional status of children who had been identified as malnourished before and after receiving selected nursing interventions, to determine whether or not there was a correlation between the mothers' awareness and the children's nutritional status, and to determine whether or not the post-test finding was associated with the mothers' awareness.

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