



EFFECTIVENESS OF SELECTED NURSING INTERVENTIONS ON MOTHER'S AWARENESS ON NUTRITIONAL STATUS OF UNDER-FIVE CHILDREN

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Abstract

Malnutrition results from a diet in which nutrients are either not enough to meet the daily requirement, or are more enough than the requirements. Malnutrition refers to the situation where there is an unbalanced diet in which some nutrients are in excess, lacking or wrong proportion. Early childhood (0-5 years) is the period for a child's physical and sociopsychological development. Children needs more care and attention during this period. The main study data was collected from the mothers of under-five children residing in selected villages of Ernakulam Tehsil. The data was analyzed by using descriptive and inferential statistics. Frequency & percentage distribution, Mean, Median, Standard deviation, Karl Pearson's coefficient of correlation, paired 't' test and Chi-square test were used to analysis the data. The study's overall findings indicated that mothers need to be educated about the preventive measures of malnutrition among their under-five children.

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

INTRODUCTION

The early years of life are crucial because they build the groundwork for a person's future health, conduct, and capacity for learning. The first three years of a child's life are critical because of how quickly they develop (WHO, 2003). There are four distinct stages of development that children go through: in utero, throughout early childhood, during middle childhood, and during adolescence. A child's development follows predictable patterns and is controlled by obvious processes at each developmental milestone. The rate at which a kid grows is not just a measure of his or her nutritional condition but also a universally recognized hallmark of the childhood years. During the formative years of a child's life, proper nutrition is especially crucial for the child's overall physical, cognitive, and emotional growth.

Children's growth and development throughout infancy depend critically on the quality of the nourishment they get in the first years of their lives. In order to provide proper nutrition care for children, it is necessary to first determine their current nutritional status. When assessing a child's nutritional health, anthropometric measures such as Weight for Age, Weight in Relation to Height, and Height in Relation to Age are used. According to the National Center for Health Statistics reference, a child's indices with a z-score below -2 indicate malnutrition.

LITERATURE REVIEW

Prasetyo, Yoyok & Permatasari, Pipit & Susanti, Henny (2023) Malnutrition is a major killer of infants and toddlers across the globe. The mother's lack of education and her low socioeconomic background also have a role. The study's goal was to examine whether or not mother nutritional education and knowledge affected the nutritional status of their children. This literature review makes use of four different databases: Embase, ProQuest, PubMed, and Google Scholar. Researchers looked at how nutrition education affected mothers' knowledge and their children's health. Educating mothers on proper nutrition led to improvements in their knowledge, outlook, and skill sets ($p < 0.001$). Babies born to moms who had received nutrition education had a significantly higher mean birth weight ($= 0.257$, $p < 0.001$) compared to those born to mothers who had not received nutrition education. Mothers and their children's health may considerably benefit from dietary education. The dissemination of new ideas and approaches may be facilitated by means such as nutritional teaching, group debate, and live demonstrations. There are several potential channels for communicating data on healthy eating and lifestyle, including books, guidelines, flyers, and even web-based apps.

Hasan, Izhar. (2010). Anthropometry is a straightforward method for determining the severity of malnutrition in children, which is an issue in variable degrees in countries with poor infrastructure. The purpose of this research was to quantify the extent to which 500 students in government schools in Azad Nagar, Bangalore, South Asia, were malnourished. Different anthropometric indices and field-based equations for classifying malnutrition were also examined for their usefulness. Students at government elementary and secondary schools were the subject of the research. Children's anthropometric information and dietary habits were gathered using a standardized questionnaire and food diary. Standard methods were used to assess a variety of anthropometric traits. Their age-appropriate Body Mass Index (BMI) was determined and compared to WHO guidelines from 2007. The average body mass index (BMI) of Azad Nagar and its surrounding area's schoolchildren was lower than World Health Organization (WHO) guidelines at every age. Malnutrition was widespread, affecting 68% of the population; men were more likely to be malnourished than females, who had a rate of 42.06% (143) compared to males' 57.94% (197). The survey found that Azad Nagar's government-school students, on average, are underweight. Children's poor diets not only hinder their mental growth, but also their ability to accomplish productive job as adults.

Elnadif, Elmanssury. (2020). One of the leading causes of illness and death among children across the globe is malnutrition. This study set out to examine the incidence of malnutrition and its contributing variables among Al-Nohoud children aged 6–59 months. A three-stage sampling strategy was utilized to choose the subdivisions, neighborhoods, and individual houses. Anthropometric assessments and formal questionnaires were the primary means of data collection. There was evidence of widespread undernourishment, stunting, and wasting (16.7 percent, 13.5 percent, and 17.6 percent, respectively). Most of the afflicted kids were 24 months old (67%). Female children were even thinner than their male counterparts. Mothers with malnourished children were more likely to be homemakers and have lower levels of schooling. Malnutrition in children under the age of five was significantly associated with maternal age, maternal education, and maternal and family income ($p < 0.0001$, $X^2 = 57.40$; $p < 0.004$; $X^2 = 41.00$; $p < 0.00$; $X^2 = 32.74$). Malnutrition was observed to be most severe among children younger than five. Significant associations between age and wasting, stunting, and underweight were found. Infant and young child malnutrition varies widely by factors such as sex, maternal age, maternal education, and household income.

Kumar, Sawan & B A, (2015) This profound adage, that "today's children are tomorrow's leaders," takes on more weight in light of this fact. There is widespread agreement that malnutrition is a serious public health issue in the world's poorest regions. It's been called a "silent killer," "silent emergency," and "invisible enemy" because of how pervasive and dangerous it is to public health. Young children are particularly susceptible to its effects. Malnutrition in children is a contributor to both the world burden of illness (16%) and India's burden of disease (22.4%). Malnutrition is directly responsible

for around half of all childhood fatalities. Objectives: Determine the rate of undernourishment in Rukmini Nagar's young children. Contents and Techniques: In a community-based cross-sectional research, 385 children under the age of five were randomly recruited from the service area of the Rukmini Nagar Urban Health Centre. The information was gathered by means of a questionnaire that had been developed, tested, and utilized before. Tape measures, shaker's tapes, and a calibrated weighing machine were used to collect anthropometric data. The data was analyzed using SPSS version 20. The final tally showed that out of 385 kids, 196 (51%) were male and 189 (49%) were female.

Mohammadinia, Neda & Sharifi (2012) inadequate nutrition is a serious public health issue in the world's poorest nations. Malnutrition is linked to 60 percent of deaths among children under five in these nations. The purpose of this research was to provide a snapshot of the magnitude of the problem of child malnutrition in Iranshahr in 2011. Substances and Techniques: A descriptive cross-sectional study is being conducted here. Using a cluster and quota sampling strategy, 700 children under the age of five from different health care facilities were picked at random. The height and weight of children were measured using NCHS-WHO norms. The information was gathered with the use of a questionnaire. Chi-square and logistic regression tests were used to analyze the data in SPSS version 18. In this study's findings, the prevalence of stunting (height for age) was 11.1% (disorder of growth = 7.7%, severe malnutrition = 3.4%) and the prevalence of underweight (weight for age) was 9.8% (disorder of growth = 7%). Malnutrition is significantly linked to factors such as birth order, mode of delivery, history of hospitalization, parental education and employment, birth weight, immunization status, and vitamin supplement use (p005). In conclusion, health professionals and parents need to be informed on the need of proper nutrition, even if the prevalence of malnutrition in our research was lower than the prevalence reported by the WHO (30%). The immune system becomes compromised due to malnutrition, which in turn increases the prevalence of infectious illnesses and newborn mortality.

RESEARCH METHODOLOGY

All children under the age of five and their mothers who live in Ernakulam Tehsil will be included in the research. First, the prevalence of malnutrition in children younger than five will be determined using a Survey Research design; then, mothers' knowledge will be evaluated and their children will be categorized according to their degree of malnutrition using a Pre experimental design. This research focused on the mothers and children aged 0-5 who live in certain neighborhoods around the Primary Health Centre in the Ernakulam Tehsil of Kerala. Using a single proportion calculation, we estimated that there would be 150 children under the age of five in the sample, with a 95% confidence interval (CI), 8% margin of error (d), and a 10% non-response rate. Ernakulam Tehsil, Kerala village children aged two to five will be included in the study's first sample. One hundred fifty people in total. Phase I's sample included 100 women whose children met the criteria for inclusion (children under the age of five who will be diagnosed with mild, moderate, or severe malnourishment).

Each household's data will be assigned a unique identifier and categorized using information gleaned from an in-depth interview with the mother of the kid, as well as from a standardized questionnaire form that included questions on the children's food intake scores. Researchers in Ernakulam Tehsil, Kerala, set out to determine how many children under the age of five in the surrounding villages will be suffering from mild, moderate, and severe malnutrition.

DATA ANALYSIS

Statistical analysis is a way to present numerical data in a way that is both comprehensible and insightful. Statistical methods help researchers condense, structure, assess, interpret, and convey numerical data. Data acquired from mothers of children under five years old about the mothers' knowledge level and the children's nutritional health are the focus of this chapter, along with their analysis and interpretation.

Table 1 shows that men made up the majority (73.3%) of household heads in the sample while women made up the minority (26.7%). The percentage of nuclear families was similar (43%), whereas the

percentage of combined families was similar (57%). The vast majority (86.1% of all households) in the sample group identified as Hindus; 4.8% as Christians; 0.6% as Muslims; 3.6% as Buddhists; and 4.8% as members of some other religious group.

When asked what their dads did for a living, 2.4% of the fathers in the sample worked in agriculture, 19.4% in business, 27.3% in overseas employment, 9.7% in labor, 9.1% in other professions, and 2.4% were unemployed.

In terms of their academic background Among the moms, 7.3% did not complete elementary school, 52.1% completed high school, 25.5% completed intermediate school, 8.5% completed college or graduate school, and 6.7% had no formal education. Among those aged 15–49, 31% of women and 10% of males have not completed high school. Only 17% of women and 19% of men have completed high school; 26% of women and 34% of men have completed some postsecondary education. Only around a third of males and almost a quarter of women have completed secondary school. According to the latest data (MoH et al., 2016), over 70% of women and 89% of males are literate. The majority of families (73.9%) had an annual income of \$150,000 to \$350,000, 13.3% of families had an annual income of less than \$150,000, and 12.7% of families had an annual income of more than \$350,000.

Table 1 Socioeconomic and Demographic Characteristics

Variables	Frequency	Percent
Head of the Household		
Male	183	73.3
Female	67	26.7
Family Type		
Nuclear	107	43
Joint	142	57
Religion		
Hinduism	215	86.1
Christianity	12	4.8
Muslim	1	0.6
Buddhism	9	3.6
Others	12	4.8
Father's Occupation		
Agriculture	6	2.4
Business	48	19.4
Employment	74	29.7
Foreign Employment	68	27.3
Labor	24	9.7
Others	23	9.1
Unemployed	6	2.4
Father's Education		
Primary	17	6.7
Secondary	130	52.1
Intermediate	64	25.5
Bachelor and above	21	8.5
None	18	7.3
Family Income		
Less than 1lakh	33	13.3
1 Lakh-2 Lakh	185	73.9
More than 3 Lakh	32	12.7
House Structure		
Cemented	209	83.6
Mud	21	8.5
Others	20	7.9

With the goal of determining how well certain nursing therapies raised parents' understanding of their children's dietary needs before they reached age five. We conducted a paired t test.

Table 2 Awareness of mothers regarding prevention of malnutrition among under-five children

Level of Knowledge	Score	Mother's Score
Good	17-20	82 (32.7%)
Average	16-17	144 (57.6%)
Poor	1-10	24 (9.7%)

Regarding the mother's level of knowledge, 32.7% mothers had good level of knowledge in child care, 57.6% scored average whereas 9.7% scored poorly in respect to knowledge questions. It can be concluded that higher percent of mothers had an average knowledge on child care.

Table 3 Significance of differences in mean score of awareness of mothers

	Mean	SD	Mean difference	t value	Calculated value	Significance
Pre-test	8.06	2.59	20.94	2.131	29.019	S
Post-test	29.0	2.66				

According to the results shown in the table above, there is a significant gap of 20.94 points between test-takers' pre- and post-test scores on the knowledge component. At the 0.05 level, the computed value (29.019) exceeded the table value (2.131). The found difference in the mean was not due to random variation. The data results show that the informational pamphlet and STP were successful in raising knowledge.

Table 4 Significance of differences in mean score of knowledge of mothers

	Mean	SD	Mean difference	t value	Calculated value	Significance
Pre-test	8.20	2.77	19.81	1.992	48.811	S
Post-test	28.01	2.55				

According to the results shown in the table above, there was a 19.81-point difference between test-takers' mean post-test scores (28.01) and test-takers' mean pre-test scores (8.20). A 0.05 level comparison between the computed value (48.811) and the table value (1.992) showed that the calculated value was larger. As a result, the obtained mean difference was a real difference and not a fluke. The information gained from the structured teaching programme was statistically significant.

Table 5 Significance of differences in mean scores of awareness of mothers

	Mean	SD	Mean difference	t value	Calculated value	Significance
Pre-test	8.61	3.21				
Post-test	27.87	2.44	19.25	1.967	86.698	S

According to the data shown above, there was a 19.24-point difference between the average post-test score of 27.87 and the average pre-test score of 8.61 on the knowledge subscale. At the 0.05 level, the estimated value (86.698) was higher than the table value (1.967). There was a statistically significant increase in knowledge after reading the informative pamphlet.

CONCLUSION

The study's overall findings indicated that mothers need to be educated about the preventive measures of malnutrition among their under-five children. Selected Nursing interventions were effective in the improvement of knowledge of mothers, therefore improvement in the nutritional status of their children. Nutritional intervention was found highly effective among the children with severe malnutrition.

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