

ASSESSMENT OF THE SELECTED NUTRITIONAL HEALTH PROBLEMS OF PRIMARY SCHOOL CHILDREN

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ABSTRACT

Background: Nutrition is very important for primary school children for their proper growth and development, because children's are the future of the nation. Nation progress depends on the children's. Good nutrition enables the children healthy, for the prevention of various nutrition related problems of primary school children nutrition is very essential. Nutritional status during school age is a major determinant of nutritional and health status in adult life. Better the Nutritional Status of the children, higher will be the Nation rise. Today's children are tomorrow's citizen who should be healthy. Therefore their nutritional status and health status is of great significance.

Aim: To identify the selected nutritional health problems and to determine the association between the selected nutritional health problems and selected socio-demographic variables.

Material and methods: A cross-sectional, descriptive research design was adapted. 100 subjects were recruited by non-probability convenience sampling technique among school children. The data gathering was carried out with an observational check list of the signs and symptoms of nutritional problems. The collected data was optimized and analyzed by using descriptive statistics and inferential statistics.

Findings: The study findings revealed that 52% of the subjects had signs and symptoms of kwashiorkor, 24% of the subjects had signs and symptoms of marasmus, 15% of the subjects had signs and symptoms of vitamin -A deficiency and 9% of the subjects had signs and symptoms of scurvy. There is a significant association found between selected nutritional problems with demographic variables such as age, gender, educational status of father and education status of mother, occupation of father and position of the child.

Conclusion:The present study revealed the urban school going children are suffering from different levels nutritional problems. Government should introduce awareness programs through community participation, involvement of NGOs and other sectors regarding affordable and nutritious foods.

Key Words:-Nutritional health problems, primary school children, urban area.

Introduction

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”¹. - WHO

Health is multidimensional and is the condition of being sound in body, mind or spirit especially freedom from physical disease or pain. Health is the outcome of a large number of determinants. The factors affecting health may be classified as agent, host and environment. The presence and interaction of these factors initiate the disease process in human being.²

Man's health may also be affected by nutrition status and play an important role in both health and disease. Various factors which affect the primary school children's health are nutrition, water supply, school environment, children's habits, home environment, peer group etc.³

In a school, good health can be attained by students, teachers, parents, and other community members who are caring for themselves and others. Individuals making decisions about and taking control of conditions and circumstances that affected and creating social conditions that enable people to be healthy, improving students understanding of health concepts and how to apply them engaging health and education representatives, teachers, students, parents, and community leaders in efforts to promote health in the community. Providing a safe, healthy environment both physical and psychological, providing effective skill-based health education, providing access to health services, implementing school policies and practices that support health, struggling to improve the health of community⁴.

Poor diet especially in school children can have an injurious impact on health, causing Nutrient deficiency diseases such as anemia, scurvy, beriberi, health threatening conditions like obesity and metabolic syndrome, and such common chronic systemic diseases as, diabetes, and osteoporosis⁵.

Malnutrition is a manmade disease which often starts in the womb and ends in the tomb. It is a global problem especially in developing countries in even in underprivileged communities of some developed countries. This is particularly true of developing countries

where the population growth is not controlled and resources are poor. The United Nations International Child Emergency Fund in 2005 reported that 150 million children are malnourished worldwide; millions of Indian children are equally deprived of their rights to survival, health, nutrition, education and safe drinking water. It is reported that 63 % of them go to bed hungry, 53% suffer from malnutrition⁶.

Nutritional status plays a vital role in deciding the health status particularly in children. Nutritional deficiencies give rise to various morbidities, which in turn may lead to increased mortality. Under nutrition also is known factor closely associated with child mortality.

Nutritional status is a sensitive indicator of community health and nutrition. About 120 million (70%) of the world's, 182 million stunted children aged under 5 years live in Asia. Analysis of six longitudinal studies by World Health Organization's revealed a strong association between severity of weight for age deficits and mortality rates. About 54% deaths of under-five children in developing countries were accompanied by low weight for age. Attempts to reduce child mortality in developing countries through selective primary health centers have focused primarily on prevention and control of specific infectious diseases⁷.

Malnutrition is also one of the major problems of school children and failure in maintenance of healthy bodily functions and typically associated with extreme poverty in economically developing countries. It is a common cause of reduced intelligence in parts of the world affected by famine⁸.

Malnutrition as the result of inappropriate dieting, overeating or the absence of a "balanced diet" are often observed in economically developed countries (e.g., as indicated by increasing levels of obesity). Most commonly, malnourished people either do not have enough calories in their diet, or are eating a diet that lacks protein, vitamins, or trace minerals. Medical problems arising from malnutrition are commonly referred to as deficiency diseases; Scurvy is well-known and now rare form of malnutrition⁹.

In addition, with increased life expectancy the nutrition problems of the primary school children's and adults also need attention.

Health problems and nutritional deficit, especially in childhood and primary school children, continue to be widely prevalent in the country in spite of many health services and nutrition oriented programmes being implemented by the government of India⁹.

Hence keeping all above points in observation and looking after statistics of numerous health problems of primary school children revealed that health problems have a

strong association between the nutritional status of a children and it has also proven that malnutrition is the main causative factor of all major health problems in school children's, so the above facts and data, investigator's personal and professional experiences motivated to conduct the present study.

Aim: To identify the selected nutritional health problems and to determine the association between the selected nutritional health problems and selected socio-demographic variables.

Hypothesis:

H₀₁: There is no significant association between the selected nutritional health problems and selected socio-demographic variables.

Materials and Methods

The cross-sectional, descriptive research design was adopted. Out of 160 school children, 100 subjects were recruited by non-probability convenience sampling technique. The study was carried out in government primary school of Bangalore district. School children those who are enrolled in registers, studying in Ist to VIIth standards and the age group of 6 to 12 years were included. School children those who are unreachable in spite of two school visits, parents who were unwilling to give consent or co-operate with the study and who are sick during data collection period were excluded. Formal written permission was obtained from the concerned authority. The data collection was carried out in the month of August-September 2017. Primarily, the investigator surveyed the selected area to identify the number of primary school children. The participants and their parents/guardian and school teacher were approached during their free time. Each of them was informed about intention of the study and parental written consent and assent from children was obtained with their anonymity and confidentiality of data. The investigators collected data using observational check list of the signs and symptoms of nutritional problems. About 20 to 30 minutes was spent by each subject for assessment in each time. Approximately 8 to 10 subjects were assessed per day.

The obtained data were analyzed using SPSS-16 software. More specifically, descriptive statistics (frequency and percentage, mean, standard deviation) were used to describe the subjects' characteristics and selected nutritional health problems. Chi-square test used in order to find out the association between the selected nutritional health problems and selected socio-demographic variables. The level of significance was set at $p < 0.05$.

Findings

One hundred (100) school children were participated in the study for final analysis. Where majority of the subjects 49% were belongs to the age group of 10-12 years. In relation to the gender, majority 59% of the subject were male. It is observed that 84% of the subjects were belongs to Hindu. 42% of the subjects' fathers were studied upto high school. 54% of the subjects mothers were studied upto high school education. It is observed that majority 56% of the subjects family income (per month) was < Rs 5000. Based on the occupation, 40% of the subjects fathers were daily wages and 56% of the subjects mothers were housewife. 59% of the subjects are living in nuclear family and 68% of the subjects are having non-vegetarian diet. It is observed that 57% of the subjects' family had two children and majority 58% of the subjects were in second position child in the family.

The study findings revealed that 52% of the subjects had signs and symptoms of kwashiorkor, 24% of the subjects had signs and symptoms of marasmus, 15% of the subjects had signs and symptoms of vitamin -A deficiency and 9% of the subjects had signs and symptoms of scurvy.

The study findings revealed that majority 56% of the subjects had mild nutritional problems and 44% of the subjects had moderate nutritional problems.

There is a significant association found between selected nutritional problems with demographic variables such as age, gender, educational status of father and education status of mother, occupation of father and position of the child.

Discussion:

Evaluation of the nutritional status of the school children is of immense importance as morbidity and malnutrition constitute heavy burden in this age group. Adequate nutrition is important among children because it affects the achievement of growth and development. Furthermore, a child's nutritional status can have an effect on their response to illness.

Nutritional status of school children can be quickly assessed by anthropometric measurements. Therefore, a nutritional assessment and assessment of nutritional health problems should be conducted on children so that their nutrition status and their health status can be identified. School children between the ages of 6-11 years were sampled as the nutritional and growth requirements in this age group is proportionally higher than adults and is an age at which occurrences of malnutrition and nutritional health problems are common.¹⁰ Malnutrition is associated with about half of all child deaths worldwide. They are more likely to die from common childhood ailments like diarrheal disease and respiratory

infections who are surviving frequents their sickness, growth and diminished learning ability¹¹

Out of 100 subjects the present study depicts that, 59 percent of the subjects were male and 41 percent of the subjects were female. 84 percent and 10 percent of the subjects were belongs to Hindu and Muslim respectively. The maximum numbers of the subjects are in the age group of 10-12 years.

A similar study was conducted by K R Saroj et al (2014), out of 207 children of which 46 percent are male and 54 are female. 77 percent and 23 percent of the subjects were belongs to Hindu and Muslim respectively. The maximum numbers of students are in the age group of 10 years.¹¹ In a study C Shivaprakash, Ranjit Baby Joseph (2014), 254 (52.5%) were boys and 230 (47.5%) were girls.¹²

Based on the age in years, Out of 100 subjects 30 (30%) of the subjects belong to the age of 6-8 years, 21 (21%) of the subjects belong to the age of 8-10 years and 49 (49%) of the subjects belong to the age of 10-12 years. These findings are consistent with the findings of study done by N C Shivaprakash, Ranjit Baby Joseph (2014) reported that, 67 (13.8%) of the subjects were belongs to 6-7 years age group, 74 (15.3%) of the subjects were belongs to 7-8 years age group, 72 (14.9%) of the subjects were belongs to 8-9 years, 90 (18.6%) of the subjects were belongs to 9-10 years, 93 (19.2%) of the subjects were belongs to 10-11 years age group and 88 (18.2%) of the subjects were belongs to 11-12 years age group.¹²

There is a significant association found in the present study between selected nutritional problems with demographic variables such as age, gender, educational status of father and education status of mother, occupation of father and position of the child. These findings are consistent with the findings of study done by N C Shivaprakash, Ranjit Baby Joseph findings suggested that nutritional status with gender¹⁰.

Conclusion and Recommendation

The present study revealed that, the urban school going children are suffering from different nutritional health problems. Nutritional health problems accounts for the majority among the numerous problems faced by the school going children. It should be competently and timely measured and corrective measures should be employed accordingly. Even though the fact that several national nutrition programmes are in operation, especially for the benefit of children, the prevalence of micronutrient deficiencies, particularly among school going children continues to be of public health concern. Government should introduce awareness

programs through community participation, involvement of NGOs and other sectors regarding affordable and nutritious foods.

Investigator recommends that Nutritional health problems of the children depends on the detailed diet history of the children from the time of birth also helps in establishing the cause for particular nutrient deficiencies as well as laboratory testing for the confirmation of certain nutritional deficiencies need to be assessed. Nutrition education should be made as a part of school curriculum apart from regular education activities. Regular health and nutritional health assessment of the primary school children for early detection and treatment is to be stressed more and current school health services programmes should be further strengthened.

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