Prevalence of malnutrition among school children aged 6-12 years attending selected schools at district Sri Muktsar Sahib.

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ABSTRACT

Introduction and aim: A good nutrition is crucial for growth and development. As majority of pre-school and school going children in countries like India consume inadequate diet and suffer from malnutrition. The present study was aimed to find the prevalence of malnutrition among school children aged 6-12 years attending selected schools of district Sri Muktsar Sahib.

Methods: A cross-sectional survey, descriptive research design was used. Total 300 school children were selected by convenience sampling technique from selected schools of block Lambi of district Sri Muktsar Sahib. Data was collected by structured interview schedule and analyzed by descriptive & inferential statistics.

Results: The prevalence of malnutrition was categorized in stunting, underweight, normal, overweight and obese. The results revealed prevalence of stunting was 0%, underweight was 52% (156), 43.7% (131) were normal. The prevalence of overweight and obese was 3.3% (10) and 1.0% (3), respectively. No significant association of nutritional Status was found with selected demographic variable at 0.05 level of significance.

Discussion: The study concluded an urgent need to update the knowledge regarding prevention of malnutrition among the school teachers as well as parents and community by incorporating the nutritional education in school health programme and community education programmes.

KEY WORDS: - Prevalence, Malnutrition, school children, selected schools.

INTRODUCTION

The children all over the world are deprived of many facilities. Hunger and malnutrition make them worst sufferers and these pose potential threats to man.¹ The 2017 Global Hunger Index (GHI) report ranked India 100th out of 118 countries with a serious hunger situation.² India is home to over one- third of world's malnourished children, and for 5.6 million deaths due to malnutrition out of 10.4 million child deaths per year. Prevalence of malnutrition varies state wise with highest in Madhya Pradesh (55%) to lowest in Kerala (27%).³

Malnutrition is a pathological state resulting

from relative or absolute deficiency or excess of one or more essential nutrient. It comprises four forms; those are Under-nutrition, Imbalance, Over-nutrition and Specific Deficiency.⁴

The importance of nutrition as a vital aspect of health promotion during all phases of the illness-wellness continuum is included as it relates to developmental phases and specific health problems.⁵ Poverty and malnutrition have a direct link-poverty is the main and principal cause of malnutrition. Poverty and malnutrition can create a self- sustaining cycle where there is never enough security or stability for recovery of health or economic development.⁶ The

direct effects of malnutrition are nutrition deficiency disorders and indirect effects are high morbidity and mortality among young children.⁷

Improvement of nutritional status of children is an essential component of primary health care. Prevention of malnutrition requires comprehensive and systematic analysis and planning. Nutrition interventions may be initiated at national, community and individual levels.⁸

MATERIAL AND METHODS

Research design: A quantitative research approach, descriptive survey design was used for the study to find out the prevalence of malnutrition. **Setting:** The present study was conducted in Primary School, Lambi and Dashmesh Public School, Lambi of district Sri Muktsar Sahib, Punjab. **Sample:** 300 school children aged 6-12 years were selected as study subjects based upon the inclusion and exclusion criteria using convenience sampling technique at district Sri Muktsar Sahib.

Instrumentation: The tool planned for data collection consists of two sections: Socio-demographical variables, Physical profile of the child. **Part-A:** This section consist of Socio-demographical variables including items for obtaining information about subjects such as class of participants, age (in years), gender, family type, birth order & occupational status of parents. **Part-B:** Consists of Physical Profile of The Child including anthropometric assessment of school children including height and weight of the child. BMI was calculated and nutritional status was assessed by using CDC growth chart 2000 (Body Mass Index- for age percentiles) adopted by WHO. Data analysis was done by using descriptive and inferential statistics.

RESULT

Out of 300 distribution of school children **Class wise** in class 2nd there were 76 (25.3%) followed by 5th class 59 (19.7%), 3rd class 58 (19.3%), 4th class 45 (15%), 6th class 35 (11.7%) and children in 1st class were 27 (9.0%). **Gender wise** 155 (51.7%) school children were male and 145 (48.3%) were females. **Age wise**, children in 6-8 years were 120(40%) followed by 8-10 years 99 (33%) and least in 10-12 years 81(27%). According to **family type**, 203(67.7%) children belong to joint family and 97 (32.3%) children were from nuclear

family. Frequency in **birth order** was that school children in 1st order were 124 (41.3%), followed by 2nd order 123(41.0%), 3rd order 39 (13.0%), 4th order 11 (3.7%) and least children were in 5th and above order 3(1.0%). **Regarding father's occupation**, the children whose father were farmer 116(38.7%), followed by laborer 100 (33.3%), private employee 34(11.3%), self-employed 27(9%), government employee 15(5.0%) and 8 (2.7%) children were there whose father was dead. Frequency of children according to **mother's occupation**, 260 (86.7%) children had housewife mother, followed by laborer 17(5.7%), self-employed 11 (3.7%), private employee 9 (3.0%) and least were in category of government employee 3 (1.0%).

Table-1: Frequency and percentage distribution of prevalence of malnutrition among school children aged 6-12 years

N=300

Nutritional status	Frequency	%age (Prevalence)
Stunting	0	0
Under-nutrition	156	52.0
Normal	131	43.7
Overweight	10	3.3
Obesity	03	1.0

The above table and figure 1 depicts that, the prevalence rate of stunting was 0% because there was no subject stunted, underweight was 52% (156), whereas 131(43.7%) subjects were normal, the prevalence of overweight and obesity were 3.3% (10) and 1.0%(03), respectively. Hence the study results revealed that **overall prevalence** rate of malnutrition was 56.3% (169) among school children aged 6-12 years in selected schools of district Sri Muktsar Sahib, Punjab.

Figure 1:- Pie diagram showing percentage distribution and prevalence of malnutrition among school children aged 6-12 years

There was no statistically significant association of prevalence of malnutrition with demographic variables of school children as calculated by chi-square value.

DISCUSSION

In the results of the study, the prevalence rate of stunting was 0% because there was no subject stunted, underweight was 52% (156), whereas 131 (43.7%) subjects were normal, the prevalence of overweight and obesity were 3.3% (10) and 1.0% (03), respectively. Finally overall prevalence rate of malnutrition was 56.3% (169). The above findings were supported by **Inkhiya S, Bika M S, et al (2016)** who conducted a cross sectional study to assess the prevalence of malnutrition in public and private schools of Bikaner district of Rajasthan among 300 school children aged 6-12 years by using stratified random sampling method. The researcher found that the prevalence of underweight, overweight and obesity was to be 30.0%, 18.33% and 1.33%, respectively. Hence overall prevalence of malnutrition was found to be 49.66%⁹.

While finding association of prevalence of malnutrition with demographic variables, there was no statistically significant association of prevalence of malnutrition with demographic variables of school children as calculated by chi-square value. These findings were supported by **Dr. Tunje D S** who conducted a cross-sectional survey to assess the prevalence and determinants of malnutrition in Kulifi of district Kenta among 338 school children aged 6-12 years. The children were studied for nutritional status and socio-demographic factors were obtained by anthropometric measurement. The results were that overall prevalence of malnutrition was 26.5% in which stunting, wasting and underweight were 16.6%, 2.7% and 8.3%, respectively. Age was the only socio-demographic factor strongly associated with stunting, wasting and underweight. Both males and females were equally affected. Gender and type of family were non-significant with nutritional status¹⁰.

RECOMMENDATIONS

On the basis of the findings of the study following recommendations were given-

- A similar study can be replicated on large sample to generalize the findings.
- A longitudinal interventional study can be conducted with control group in order to see the effectiveness of various nutritional interventions.
- Evaluative studies can be conducted to assess the impact of nutritional programmes run by department of health.

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