

**A CROSS SECTIONAL STUDY TO TO ASSESS THE PREVALENCE OF MALNUTRITION AND ITS ASSOCIATED FACTORS AMONG SCHOOL CHILDREN 9-14 YEARS IN RURAL AREA, REWARI (HARYANA).**

**Nisha Yadav<sup>1</sup>, Pt. Bagwat Dayal Sharma<sup>2</sup>**

<sup>1</sup>In Partial Ful fill ment of Master Of Science In Community Health Nursing Under The Guidance of MR. Ravinder Vyas

<sup>2</sup>(HOD) University Of Health Science Rohtak, Haryana

Corresponding Author:

**Nisha Yadav**

In Partial Ful fill ment of Master Of Science In Community Health Nursing Under The Guidance of MR. Ravinder Vyas

Email : nishayadav1211990@gmail.com

Received 2022 August 09 Accepted 2022 August 25, Published - 2022 September 07

**ABSTRACT:** Introduction: "Children are the world's most valuable resource and its best hope for the future." The children of today are the future of tomorrow'; this powerful statement assumes special significance in our context as children (0-14 years) comprise one third of the total population in the country. India is one among the many countries where child malnutrition is severe and also a major cause of child mortality. The problem has caught the attention of the policy makers and researchers for several decades. Various studies and surveys have been conducted to find out the root causes of child malnutrition. All these studies including the three National Family Health Surveys (NFHS) (1)

**Material and Method:** This study was conducted in Rewari. Study The sample consisted of 60 children 9-14 year, selected by convenient sampling technique Rewari District. The tools namely structured questionnaire and checklist were administered to six 9-14 year school children.

**Result:** The study was undertaken of district Rewari, Haryana State. The data collected were organized and presented under the following headings.

**Section I:** Classification of malnutrition based on WHO growth chart

**Section II:** Distribution of subjects according to the symptoms associated with Malnutrition

**Section III:** Distribution of subjects according to the factors related to malnutrition

**Section IV:** Association between malnutrition and selected variables

Conclusion- Among 60 9-14 Year children more than half of the children 32 (52.5%) were boys and 28 (47.5%) were girls. About 26 (44%) of the under-fives had normal weight and 34 (56%) were malnourished. Among 15 years children, more female children 36 (52.5%) had moderate malnutrition than boys 28 (47.5%). Dental caries was the most commonly occurring symptom 6 (9.5%) among malnourished children, followed by pale conjunctiva 5 (7.5%). There was an association between under-five malnutrition with educational status of mother, total family income of family and timing of weaning.

**Keyword:** Migrant families, malnutrition, associated factors.

**INTRODUCTION:** Malnutrition is common in India, one in every three malnourished children in the world live in India. There are nearly 16 crore children in the country below the age of six years. The health of our economy and society lies in the health of this generation. We cannot hope for a healthy future with a large number of malnourished children. The problem of malnutrition is a matter of national shame. Malnutrition places a heavy burden on India;<sup>1</sup>

Early childhood (0-6 years) is a very critical period for a child's physical and socio psychological development. All children need care and attention. Children below six years are particularly vulnerable to malnutrition, infections and accidents, therefore need special care and health services.. World Health Organization (WHO) division of the Child Health Development (CHD) is at the forefront of a renewed effort to improve the health prospects of the world's children.<sup>2</sup>

Child malnutrition activities have been conducted in the last 30 years with various scales.. The improvement of individual nutritional status is decisive to comprehensive development of the society that leads to the civilization of each country.<sup>3</sup>

Industrialization and urbanization forced the people to move in to the slums and made the life more miserable. In India around 46% of all children below the age group of three are too small for their age, 47% are underweight and at least 16% are wasted. The prevalence of malnutrition varies across the states, with Madhya Pradesh recording the highest rate (55%) and Kerala among the lowest (27%).<sup>4</sup>

To improve the quality of human resources, we should start from improving nutritional status, particularly that of children. The most commonly intake, breastfeeding, prevalence of infectious and parasitic diseases, access to health care, immunization against major childhood diseases, vitamin A supplementation, maternal care during pregnancy, water supply and sanitation, socioeconomic status, and health-seeking behavior. Demographic characteristics such as the child's age and sex, birth intervals (both preceding and following), and mother's age at childbirth are also associated with child nutrition.<sup>5</sup>

**MATERIAL AND METHOD:** Research approach used in this study was descriptive survey An descriptive survey approach was adopted to assess the effectiveness of a structured questionnaire was used to identify the factors associated with malnutrition, WHO growth chart used to classify the malnutrition and an observational check list used to identify the symptoms present in the malnourished children.

The following steps were followed.

The data collected were organized and presented under the following headings

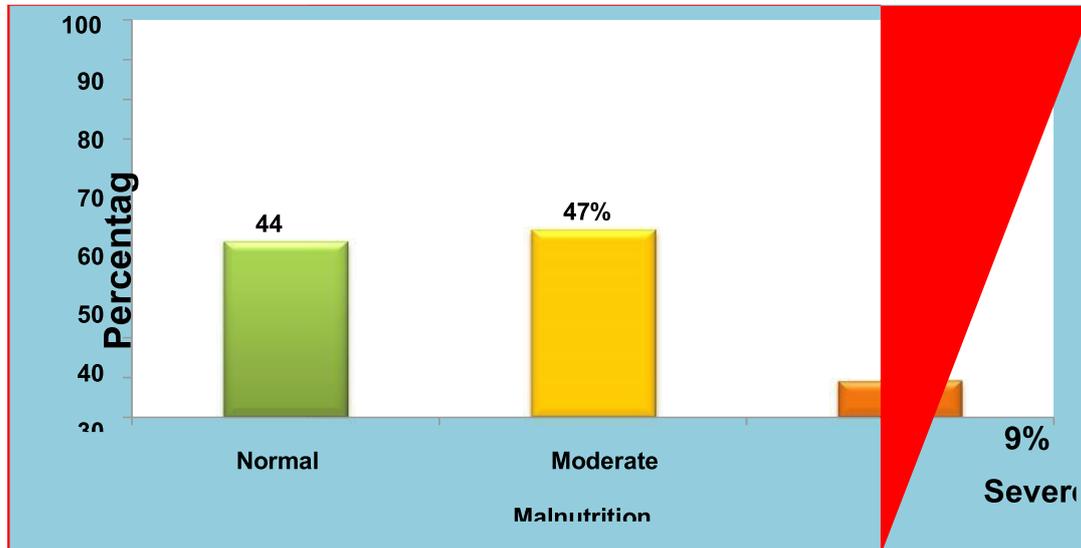
- Section I** : Classification of malnutrition based on WHO growth chart.
- Section II** : Distribution of subjects according to the symptoms associated with Malnutrition.
- Section III** : Distribution of subjects according to the factors related to malnutrition.
- Section IV** : Association between malnutrition and selected variables..

**Result: DISTRIBUTION OF DEMOGRAPHIC VARIABLES**

**Table 1:** This section deals with classification of malnutrition according to WHO growth chart and is explained in terms of frequency and percentage.

Two hundred 9-14 year school children were weighed using weighing scale and their Weights were compared with WHO growth chart.

**Percentage-Classification of malnutrition according to WHO growth chart.**



**Figure 1:** Bar diagram showing classification of malnutrition based on WHO

Growth chart

The data presented in the Figure 3 shows that less than half 26 (44%) of children were normal in weight, 28 (47%) were moderately malnourished and 6 (9%) were severely Malnourished.

**Section II:** Distribution of subjects according to the symptoms associated with malnutrition All the children were assessed by the investigator through physical examination and the check list was used to score the symptoms of malnutrition. The common symptoms found in the physical examination as follows.

**Table 2:** Distribution of subjects according to the presence of symptoms of malnutrition

S.N.		f	%
1	Dental caries	6	9.5%
2	Pale conjunctiva	5	7.5
3	Dental discoloration	3	5.5
4	Distended abdomen	2	4
5	White patches over the extremities	3	2
6	Dermatitis	3	2
7	Mouth sores	1	1
8	Dry skin	1	0.5

**symptoms of malnutrition.**

Data in the table 2 illustrates that most commonly occurring symptom was dental caries 6 (9.5%) and pale conjunctiva was the second most common symptom 5 (7.5%). An equal number of children (2%) had the symptoms of white patches and dermatitis.

**Section III: Sample characteristics**

This section deals with factors associated with malnutrition and explained in terms frequency and percentage. Table 3 Frequency and Percentage distribution of subjects according to associated with malnutrition. N = 60

S. No	Variable	f	%
1	<b>Age in years</b>		
	9-10	4	5.0
	11-12	10	17.0
	13-14	17	29.0
2	15 year	29	49.0
	<b>Gender</b>		
3	Male	32	52.5
	Female	28	47.5
4	<b>Religion</b>		
	Hindus	53	89.5
	Muslims	6	10.0
5	Christians	1	.5
	<b>Type of Family</b>		
	Nuclear	44	73.5
	Joint	4	7.0
6	Extended	12	19.5
	<b>Education status of the father</b>		
	No formal education	22	37.0
7	Primary	27	45.5
	Secondary	10	15.0
8	Primary	28	46.5
	Secondary	10	16.5
9	<b>Occupation of the father</b>		
	Industrial work	10	15.5
	Daily wages	34	57.0
	Construction work	13	22.0
10	Others	3	5.5
	<b>Occupation of the mother</b>		
	House wife	45	76.0
11	Daily wages	14	23.5
	Others	1	.5

9	<b>Monthly income( ₹ )</b>		
	2000-3000	1	1.0
	3001-4000	38	63.5
	>4000	21	35.5
10	<b>BPL Card</b>		
	Yes	4	9
	No	51	85.5
11	<b>Type of house</b>		
	Kutchha	59	99.5
	Pucca	1	.5
12	<b>Source of water</b>		
	Public tap	59	99.5
	Well	1	.5
13	<b>Toilet facilities</b>		
	Own toilets	36	61.0
14	<b>Staple food</b>		
	Rice	31	52.5
15	<b>Number of 9-14 year school s children the family</b>	14	23.5

The data presented in the Table 3 shows that the highest numbers of subjects were found in the age group of 15 years 29 (49%) and the least number of samples were found between the age group of 9-10 years 4 (5%).

**Table 4:** Chi-square value showing the association between malnutrition and selected variables

N=60

Sl.No	Variable	p value	χ
1	Age in years	.130	5.648
2	Religion	.724	0.125
3	Type of family	.407	1.797
4	Educational status of the father	.677	0.780
5	Educational status of the mother	0.000*	58.97
6	Occupation of the father	.643	0.883
7	Occupation of the mother	.169	1.888
8	Monthly income	0.000*	22.01
9	Type of food	.377	0.779
10	Number of 9-14 year school s in the family	.344	2.133
11	Birth order	.868	0.283
12	Breast feeding	.588	0.294
13	Timing of Weaning	0.000*	23.04
14	Immunization status	.190	1.718
15	Primary care taker	.758	0.095

34 Data presented in the table 4 shows the  $\chi^2$  value computed between malnutrition and selected variables. There is a significant association for educational status of mother ( $p = 0.000$ ), monthly income ( $p=0.000$ ), weaning ( $p=0.000$ ). Therefore, the null hypothesis was rejected and the research hypothesis was accepted for educational status of mother, monthly income and weaning. Hence it can be interpreted that malnutrition of 9-14 year school children is associated with selected variables like educational status of mother, total monthly income of family and timing of weaning.

**DISCUSSION:** The findings of the study are discussed under the following categories. The discussion is based on demographic variables of the subjects, objectives, hypothesis, related literature and conceptual frame work of the study and findings are discussed by comparing the findings of studies already undertaken in this area.

**CONCLUSION:** In this chapter, the investigator has dealt with the various nursing implications of the study and the limitations, which the investigator had experienced in the study. The experience of the investigator during the study has helped to give suggestions and recommendations for further studies.

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