

# Assessment of Nutritional Status of Boys and Girls in Government School Children in Rompicherla Mandal Andhra Pradesh, India

P. Sasikala \*

Faculty of Public Health, St. Theresa International College, 1Moo 6, Rang Sit, Nakhonnayok Road, Klong 14, Bungsan, Ongkharak, Nakhonnayok- 26120.

Email: [vbrsasikala@gmail.com](mailto:vbrsasikala@gmail.com)

Orawan Chanchalor

Faculty of Education, St. Theresa International College, 1Moo 6, Rang Sit, Nakhonnayok Road, Klong 14, Bungsan, Ongkharak, Nakhonnayok- 26120, Thailand.

## Abstract

Nutrition is the intake of food to meet the body's dietary Needs through different sources namely vegetarian and non-vegetarian foods. Good nutrition and well balanced diet with regular physical activities is acceptable. Poor nutrition leads to reduction in immunity of an individual, in other hand increased levels of nutrition leads susceptible to a wide varieties of disease, damage the physical, mental development and reduced productivity. The purpose of this study is to find the nutritional status of school going boys and girls in Government school children in Rompicherla Mandal, Chittoor District of Andhra Pradesh. As we all know they are the future of our country. In view of the the importance of children health care especially, Indian population consist approximately forty percent are children and that to under the age of 15 years. To assess the anthropometric indices among children. A total number of 613 Government school going children were selected for the present study. A complete physical examination of the children was conducted and recorded. In the present study out of total 613 school going children 49.43% had overall normal nutritional status, 24.14 % Grade-I, 16.48 Grade-II and 9.95 had overall Grade-III. 23.59% (92) had Grade-I, Grade-II 16.15% (63) and Grade-III malnutrition 11.80% (46) respectively in boys of study area in the Government Schools. Where as in girls over all 51.12 % (114), 25.11% (56), 17.04% (38) and 6.73% (15) respectively had the malnutrition in the study area. In the present study, nutritional status was found highly related to the personal hygiene and socio economic status. Schools need to provide knowledge and awareness about Personnel hygiene, Nutrition.

**Keywords:** Government schools Nutrition, School Children, Anthropometry, Malnutrition and Dietary intake.

## Introduction

Among the Indian, school going children in the age group of 6–18 years possess the existence of double burden of underweight and overweight[1].The fundamental importance of the parents and society is the health of children because today's children are the citizens of tomorrow's world. As we all know our population consists 40 percent of children age group covers primary and secondary education [2, 3]. Hence the protection, survival and development are the prerequisites for the future of school children, to develop humanity and human resources [3]. In the year 1990 the world summit for children were conducted, 159 member countries participated aimed to extremity malnutrition by end of the decade in young school going children [4]. Early childhood during the first five years of a child will grow rapidly, hence in this particular period nutrition is one of the most influencing factor [5]. Malnutrition in children leads physical and psychological instability and suffering. This is also a child's human rights violation. Malnutrition substantially increases the vulnerable to wide variety of diseases in the future which leads to infant and child deaths in developing countries like India. As we all know living organism namely mammals are the product of nutrition, hence basic key requirement for good health is good nutrition [6].

The first five years are most important in child's life, children underweight and undernourished children are likely less cognitive than the others [5]. Widely accepted methods for assessing the nutritional status of children is anthropometry methods such as mid arm circumferences, weight for age, body mass index and weight for

height. To compare these kind of indicators we need to be use with specific references from National Center for Health Statistics tables to interpret and analyse the data.

The main aim of the present study is to assess nutritional status of children community, map out the magnitudes geographical distribution of malnutrition, to identify, analyse direct or indirectly influencing factors for malnutrition. To suggest appropriate measures to overcome malnutrition. In view of the above objectives the present study carryout in Government High Schools of Rompicherla Mandal, 1<sup>st</sup> to 10<sup>th</sup> standard school going students. The main objective of this study is to diagnose the nutritional deficiencies in school going children of the study area, assessment of anthropometric indices nutritional status assessment assess in government school going children of Rompicherla Mandal and its surrounding area.

### Methodology

The present work is on prevalence of malnutrition in school going children. The main objective and focus of this study is to find out the prevalence and factors associated with nutritional status among school going and adolescents boys and girls 5-15 years of age. To achieve the objectives the following parameters were selected. Sample selection for present study, samples were selected from Government schools situated in and around Rompicherla Mandal, Chittoor District, AP, India. These subjects were taken to study nutritional in School going children. General information namely Age, sex, parent education, occupation, type of family, income level, family size, physical activity and life style characteristics were collected by using prepared questionnaire. Anthropometric parameters

### Results and Discussion

General Information of the Subjects age, family size, literacy, type of family, income level and diet history have been taken into consideration for the study, tabulated and results are given. Anthropometric Assessment of Boys and Girls these measurements are an important aspect to know individual body composition.

Table: 1. Distribution of the students according to their age groups

Age	No of students	Percent %
5-5.11	63	10.28
6-6.11	56	9.14
7-7.11	59	9.63
8-8.11	74	12.07
9-9.11	46	7.5
10-10.11	65	10.6
11-11.11	70	11.42
12-12.11	36	5.87
13-13.11	63	10.28
14-14.11	81	13.21
Total	613	100

In this study 613 subjects were included from government higher primary school. Children were belongs to 5 to 14 age group. Out of 613 children 63 (10.28%) children were belonging to 5 to 5.11 months age group, 56 (9.14%) were belonging to 6 to 6.11 age group, 59 (9.63%) were belonging to 7 and 7.11 months of age group, 74 (12.07%) were belonging to 8+ age group, 46(7.5%) were belonging to 9+ age group, 65 (10.6%) were belonging to 10-10.11 months age group, 70 (11.42%) were belonging to 11-11.11 months of age group, 36 (5.87%) were belonging to 12-12.11 months of age group, 63 (10.28%) were belonging to 13-13.11 months of age group, 81 (13.21%) were belonging to 14-14.11 months of age group (Table 1).

Table: 2. Distribution of the students according to their gender.

Gender	No of children	%
Boys	390	63.62
Girls	223	36.38
Total	613	100%

In the present study both boys and girls were included. Out of total 613 subjects 390 (63.62%) were boys and 223 (36.38%) were girls. The number of boys was more than the number of girls. The ratio of Girls: Boys was 1:1.79 this indicates the future hurdles of Andhra Pradesh, India and the globe. This is due to most of the Indian parents are more inclination towards boys education in rural and semi urban areas [7]. The data supports the findings of the present study revealed the enrolment of less number of females in comparison to males in schools (Table 2).

Table: 3. Distribution of the students according to their parental educational qualifications

Educational status of the parents	Mother		Father	
	No of children	Percent %	No of children	Percent %
Illiterate	210	34.25	159	25.93
Primary	127	20.71	155	25.28
High school	151	24.63	101	16.47
Intermediate	100	16.31	56	9.13
Under graduate	15	2.44	75	12.23
Masters and above	10	1.63	67	10.93

In the present study most of the children were belongs to nuclear families, some were belonging to joint family and very less were belonging to three generational family. In the study area 210 (34.4) students mothers are illiterate, 127 are had up to primary school (20.71%) 151 up to High school (24.61%), 100 up to intermediate (16.31%), 15 were undergraduates (2.44%) and Masters and above were 10 (1.63) where in case of fathers 159 (25.93%), 155 (25.28%), 101 (16.47%), 56 (9.13%), 75 (12.23%) and 67 (10.93%) respectively. In the study area literacy rate of parents was lower, may be because of lower, middle socioeconomic status (Table. 3)

Table: 4. Distribution of the students according to their parental Occupation

Occupation	Mother		Father	
	No of children	Percent %	No of children	Percent %
Skilled worker or Self-employment	41	6.68	274	44.69
Semiskilled	65	10.60	119	19.41
Private Employee	120	19.57	122	19.90
Government employee	36	5.87	65	10.60
Unemployed	459	74.87	33	5.38

The present study revealed that 41(6.68) children had occupationally skilled mother and 227(44.69%) father, occupationally semiskilled father 119(19.41), mother 65 (10.60), Private employee mother 120 (19.57), father 122 (19.90), Government employee mother 36 (5.87), father 65 (10.60) and unemployed mother 459 (74.87), father 33(5.38) respectively (Table. 4).

Table: 5. Distribution of the students according to their parental Socio economic status

Socio economic status	No of children	%
Upper middle class	67	10.93
Lower middle class	256	41.76
Upper lower	290	47.31
Total	613	100

From the above table a total 613 children in the present study area were belongs to as follows namely

Upper middle class 67 (10.93) lower middle class 256 (41.31), and upper lower class 290 (47.31) respectively (Table 5)

Table 6. Distribution of the students according weight

Gender	No of children	Normal weight	%	Underweight	%
Boys	390	144	36.92	246	63.08
Girls	223	83	37.22	140	62.78
Total	613				

From the above table a total 613 children boys were 390. Out of 390 boys 144 (36.92) are in normal weight and 246 (63.08) where as in girls out of 223, 83 (37.22) are in normal weight and 140 (62.78) are underweight in the study area (Table 5). The overall prevalence of underweight in the school children is found 386 (63.0), and 227 (37.0). The prevalence rate are due to improper dietary intake of the children irrespective gender, parents may be lack of knowledge on nutritional dietary intake per day and importance of balanced nutrition. Another important factor inclination of boys towards the snacks. A study conducted and reported the prevalence of underweight as 60.4% from study population in Kashmir (8), similarly in Karnataka reported prevalence of underweight as 60.4% (9). In the present study prevalence of underweight is slightly higher than the above studies, may be due to both were conducted in private as well as Government School going children with a huge number of sample size with respective to the present study and consciousness, knowledge and awareness about underweight (Table 6).

Table 7. Distribution of the students according to nutrition

Gender	No of children	Normal	%	Malnutrition	%
Boys	390	165	42.30	225	57.70
Girls	223	114	51.12	109	48.88
Total	613				

The overall prevalence of malnutrition in school children of the present study area at 54.5% (334) among the boys it is 225 (57.70) where as in girls 109 (48.88) may be it is due to economic status of parents and family, lack of knowledge on nutritional importance and among the boys poor in dietary habits. Similarly reported in a study malnutrition as 50% [10]. In another study in Madras city reported prevalence of malnutrition as 79% [11] and a study from school children of Tirupati city reported the prevalence of malnutrition as 47% [11, 12, 13]. In present study prevalence of malnutrition found to be 54.5%. The prevalence rate are due to improper dietary intake of the children irrespective gender, parents may be lack of knowledge on nutritional dietary intake per day and importance of balanced nutrition. Another important factor inclination of boys towards the snacks. Apart from these in the early stages boys are more malnutrition than girls it is due to high frequency of paediatric diseases in boys than girls. Apart from these reasons snacks, junk food, bakery items also play an important role in predispose to malnutrition as maximum of them provide only energy but deficient in both macro as well as micronutrients, and boys are preferred. The results of the study are summarized in table. 7.

Table 8. Distribution of the students Nutritional grading.

Gender	No of children	Normal	Nutritional grade			
			Grade -I	Grade -II	Grade -III	Grade -IV
Boys	390	189 (48.46)	92 (23.59)	63 (16.15)	46 (11.80)	--
Girls	223	114 (51.12)	56 (25.11)	38 (17.04)	15 (6.73)	--
Total	613	49.43	24.14	16.48	9.95	

In the present study out of total 613 school going children 49.43% overall had normal nutritional status, 24.14 % Grade-I, 16.48 Grade-II and 9.95 had overall Grade-III. 23.59% (92) had Grade-I, Grade-II 16.15% (63) and Grade-III malnutrition 11.80% (46) respectively in boys of study area in the Government Schools.

Where as in girls over all 51.12 % (114), 25.11% (56), 17.04% (38) and 6.73% (15) respectively had the malnutrition in the study area. Similarly a study reported prevalence of grade I malnutrition as 30.5%, of grade II, malnutrition as 42.5%, and of grade III malnutrition as 21.5%. [11, 12, 13]. In present study the prevalence of malnutrition was higher than the above study because of large sample composed with private and government schools.

### **SUMMURAY AND CONCLUSION**

In the present study out of total 613 school going children 49.43% had overall normal nutritional status, 24.14 % Grade-I, 16.48 Grade-II and 9.95 had overall Grade-III Malnutrition. The present study once again revealed the personal hygiene play an important key role in the health status of personnel.

The recommendation to improve the health status of the school children of the study are as follows schools need to provide knowledge and awareness about Personnel hygiene, Nutrition. Schools need take initiative to inculcate the Health education as a part of curriculum apart from the regular educational activities in the community. Need to initiate awareness programs on how to improve home hygiene and health with the help of public health workers and protected water supply in schools as well as community. Alleviation of poverty by creation of facilities for improving economic status of the population in the study area. School health services need to be planned for the betterment of school children. Awareness on local production of healthy and hygienic fresh food. Better drainage facilities, daily garbage clearance are need to be done under the periodical supervision.

### **REFERENCES**

- [1] Hemamalini K, and Lalitha Kumari B. 2016 7(1) Res. J. Pharm., Biol. Chem. Sci. 2016 7(1)1054- 1062
- [2] Raghava PK. School health. Ind. J. comm. Med. 2005 30:1-3.
- [3] Anonymous. Geneva: WHO 1996, 1, 9, 10-15.
- [4] Shills ME, Young VREd. Lea and Febiger; 1998 50-58.
- [5] Shashi, Indira Bishroj. The Ind. Pract. 1990 109(6):461.
- [6] Begum, Raheenam. Steriling Publishers 1997, 1.
- [7] Anonymous. (2000-2001), 2001.
- [8] Patwari A, Aneja S, Jasrotia JS, Gandotra VK. Ind. Pediatr. 1979 8:796-802.
- [9] Josheph B, Rebello A, Kullu P, Raj VD. Ind. J. health and pop. Nutri. 2002 3:239-244.
- [10] Dhingra DC, Anand NK, Gupta S. Ind. Pediatr. 1977 14:242-267.
- [11] Sundaram MV, Sankaranarayanan VS, Susila R, Varalakshmi Sarasa. Ind. Pediatr. 1978 15(9):725-730.
- [12] Izharul Hasan, Mohd Zulkifile and Abdul Haseeb Ansari. Arch. Appl. Sci. Res. 2011, 3 (3): 167-176
- [13] Indira Baik, Ratna Malika. DPNM; Ind. Pediatr. 1976 13:751-758