Comprehensive Assessment of Nutritional Status in School Aged Children- A Cross Sectional Study

Dr.Keerthi Annavarapu[1], Gopu.Vijaya Sindhuri[2], V.Anusha[3], Y.Pavithra[4]
[1,2,3,4] *St.Mary's college of pharmacy*

Abstract: Nutritional status in children refers to the state of a child's health as determined by their diet and nutrient intake. The evaluation of nutritional status is essential for identifying the individuals at risk of malnutrition and for guiding public health interventions. The present study aims to assess the nutritional status of 7 to 14 years school aged children in St. Mary's School Secunderabad, Telangana by employing multifaceted approach that includes questionnaire, anthropometric measurements, food habits and lifestyle analysis. A total of 160 pupils were recruited, representing 7 to 14 years age group and various socio-economic background. Data collection involved administering a detailed questionnaire to capture dietary intake, food frequency, lifestyle factors like physical activity and sleep pattern. Measurements include height, weight, BMI were recorded to provide objective indicators of body composition. The present study results revealed that out of 160 pupils, 130 or healthy weight, 10 are underweight, 16 are overweight, 4 are obese. Mostly students were taking their breakfast, lunch, dinner regularly. Many students were consuming rice, dal, egg, wheat, milk, yogurt on a daily basis. Screen time usage among children varies significantly with the majority 60% spending three or more hours on mobile devices daily. Extended screen time finding can impact children in physical and mental health, hormonal imbalance. Thus, it may be leads to early puberty.

keywords: Nutritional status, questionnaire, anthropometric measurements, food habits, lifestyle, public health

INTRODUCTION

"Malnutrition possess significant health risks, including stunted weakened immunity, anemia, organ damage, mental health disorders and increased susceptibility to diseases".

'In India, malnutrition affects approximately 38% of children under five. In the UK, it is estimated that 1 in 4 adults are affected by malnutrition, while in the USA, around 12% of the population experiences food insecurity, leading to malnutrition concern'.

Malnutrition encompasses deficiencies, excesses, or imbalances in nutrient intake. Undernutrition includes protein-energy malnutrition (PEM) like kwashiorkor and Marasmus, as well as micronutrient deficiencies leading to conditions such as Anemia and Goiter. Over-nutrition results in obesity and related diseases like cardiovascular ailments, type 2 diabetes, metabolic syndrome, and certain cancers. Understanding and addressing malnutrition is essential for preventing and managing these associated health risks, promoting overall well-being globally.

Etiological diagnosis identifies underlying causes like inadequate intake or illness. Anatomical diagnosis assesses physical signs such as weight loss and muscle wasting. Functional diagnosis evaluates effects like impaired immunity and cognitive function. These together provide a comprehensive understanding of malnutrition for effective intervention

Malnutrition, encompasses both under nutrition and over nutrition, affecting individuals of all ages worldwide. Malnutrition not only compromises physical health but also hinders cognitive development, economic productivity, and overall well-being. By addressing malnutrition, the project seeks to promote sustainable development, reduce health inequities, and improve the quality of life for vulnerable populations. Key components of the project include comprehensive nutritional assessments, targeted interventions, community education, the project aims to implement evidence-based strategies tailored to the specific needs and contexts of each target population. Through a holistic approach that integrates nutrition education.

MATERIALS AND METHODS

Site of study:
The assessment of nutritional status in boys and girls was done in the premises of ST. MARY'S SCHOOL, Secunderabad St. Francis Street sd. Road.

Study design and participants:
It was a prospective cross – sectional study conducted in both boys and girls of educational department ST. MARYS SCHOOL. children of either sex were diagnosed with lack in intake of nutritional food.

Sample size:
160 Subjects.

SOURCES OF DATA
WHO guidelines.
Anthropometric measurements.
Nutritional status of children

STUDY PROCEDURE

A cross sectional study was conducted to understand the nutritional status among urban school children of 7-15 years age group and interplay of different socio demographic factors contributing to it. Children were assessed for nutritional status by taking anthropometric measurements like height & weight. Analysis was done using frequency distribution, calculating weight for age and classified malnutrition according to IAP and Gomez classification.

RESULTS AND DISCUSSION

GENDER OF THE PUPIL

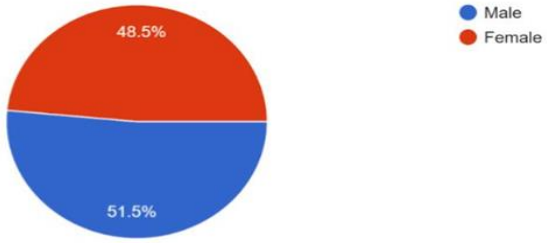

Figure: 2 Frequency distribution of gender of pupils

The above pie chart represents the Gender distribution of pupils with 51.5% male and 48.5% of female. The male segment would be slightly larger, reflecting the higher percentage of males.

GENDER	NUMBER OF SUBJECTS	%
BOYS	85	51.5%
GIRLS	75	48.5%
TOTAL	160	100%

Table : 1 Frequency distribution of gender of pupil

In the present study both boys and girls were included. Out of total 160 subjects 85 (51.5%) were Boys and 75 (48.5%) were Girls. The number of boys was slightly higher than girls in the present study encompassing 160 subjects, 85 of them are boys while 75 are girls, reflecting a gender distribution where boys outnumber girls slightly. This distribution translates to approximately 53.125% of the total subjects being boys and about 46.875% being girls. Therefore, the study comprises 51.5% boys and 48.5% girls, with boys having a slight numerical advantage. There is a slightly higher prevalence of boys among the subjects.

OCCUPATION OF PARENTS

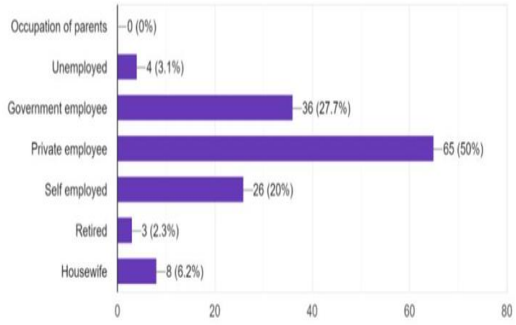

Figure: 3 frequency of distribution of occupation of parents

Occupation	Mother		Father	
	Number of children	Percent (%)	Number of children	Percent (%)
Unemployed	26	26%	-	-
Government employee	6	6%	50	50%
Private employee	20	20%	80	80%
Self employed	10	10%	30	30%
Retired	-	-	3	3%
Housewife	98	98%	-	-

Table: 2 Frequency distribution of occupation of parents.

Housewives represent the largest portion of the bar graph at 98%, indicating that the majority of mothers are engaged in household duties. Unemployed mothers account for about 26% of the pie chart, reflecting a significant portion of mothers not currently employed. Mothers working as government employees make up around 6% of the chart, indicating a smaller but still notable percentage. Private employee mothers represent about 20% of the pie chart, suggesting a substantial portion of mothers working in the private sector. Self-employed mothers account for approximately 10% of the chart, indicating a smaller but still significant portion of mothers who are self-employed. Retired mothers and retired parents are absent from the chart, suggesting that less percent of the parents are retired.

This bar graph provides a clear visual representation of the occupation distribution among the parents.
Unemployed fathers have a null representation, indicating none of the fathers are unemployed. Government employee fathers make up approximately 50% of the pie chart, representing a significant portion of fathers working in government positions. Private employee fathers account for about 80% of the chart, indicating a substantial majority of fathers working in the private sector. Self-employed fathers represent around 30% of the pie chart, suggesting a notable portion of fathers are self-employed. There are no retired fathers represented in the chart.

This bar graph illustrates the distribution of father's occupations among the children, highlighting the dominance of private employment and significant representation of government employment, with no fathers reported as retired or unemployed.

EDUCATION LEVEL OF PARENTS

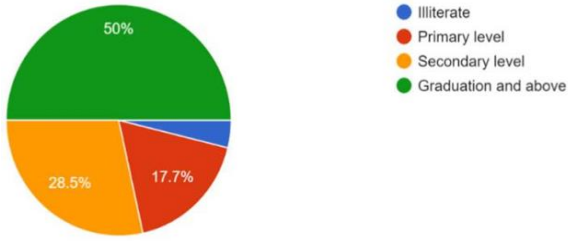

Figure: 4 Frequency distribution of education level of parents.

In this study, the education levels of the parents are categorized into four main groups. First, 50% of the parents have completed graduation and above, indicating that half of the parents have achieved a higher level of education, such as a bachelor's degree or higher. Second, 28.5% of the parents have attained a secondary level of education, which typically includes completion of high school or its equivalent. Third, 17.17% of the parents have reached the primary level of education, indicating completion of elementary education. Finally, the remaining percentage of parents fall into the category of being illiterate, meaning they have not acquired formal education. This breakdown sheds light on the diverse educational backgrounds of the parents involved in the study, with varying levels of academic achievement and literacy

AGE OF THE PUPIL.

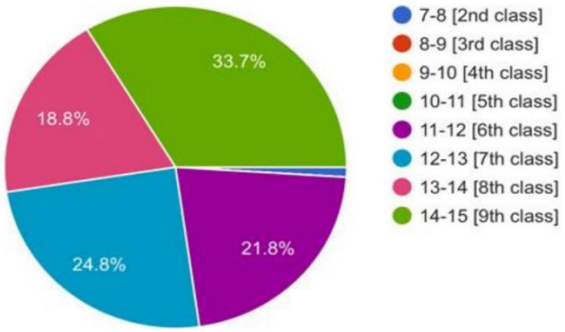

Figure: 5 Frequency distribution of age of pupil

The pie chart depicts the age distribution of pupils across various classes. The largest proportion, comprising 33.7% of the total, represents students aged between 14 to 15 years, who predominantly belong to the 9th class. Following closely, 18.8% of the children, aged between 13 to 14 years, are typically associated with the 8th class. Additionally, 24.8% of the pupils, aged between 12 to 13 years, are attributed to the 7th class, while 21.8% of the pupils, aged between 11 to 12 years, belong to the 6th class. The remaining segment of the chart represents children of younger ages and classes, including 7 to 8-year-olds (3rd class), 6 to 7-year-olds (2nd class), and 5 to 6-year-olds (1st class). This breakdown offers a comprehensive view of the age distribution among pupils across different grade levels, aiding in understanding the pupil demographics within the educational institution.

PHYSICAL ACTIVITY

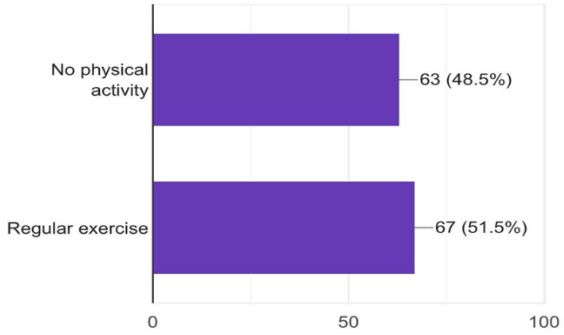

Figure: 6 Frequency distribution of physical activity.

The bar graph represents the physical activity levels among children. On the horizontal axis, there are two categories: "Never Exercise" and "Regular Exercise." The vertical axis represents the percentage of children in each category.

The bar for "Never Exercise" extends to 48.5%, indicating that nearly half of the children surveyed reported never engaging in physical activity. This bar would be relatively short to reflect the lower percentage.

The bar for "Regular Exercise" extends to 51.5%, indicating that slightly more than half of the children engage in physical activity regularly. This bar would be taller to reflect the higher percentage.

Overall, the graph illustrates the distribution of physical activity among children, with a significant portion reporting no exercise and a slightly larger portion engaging in regular physical activity.

FOOD HABITS AND LIFESTYLE FACTORS VARIABLE

Food habits

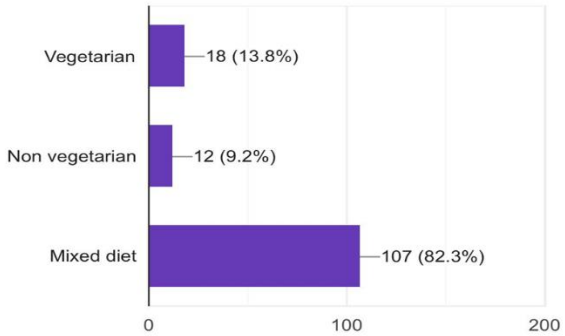

Figure: 7 Frequency distribution of food habits

The bar graph illustrates the dietary preferences of pupils, categorizing them into three groups: "Mixed Diet," "Non-Vegetarian," and "Vegetarian." On the horizontal axis, these three categories are listed, while the vertical axis represents the percentage of pupils in each category. The bar for "Mixed Diet" extends to 82.3%, indicating that the majority of pupils have a mixed diet. This bar would be the tallest to reflect the highest percentage. The bar for "Non-Vegetarian" extends to 9.2%, indicating that a small proportion of pupils follow a non-vegetarian diet. This bar would be relatively shorter compared to the mixed diet bar. The bar for "Vegetarian" extends to 13.8%, indicating that a modest percentage of pupils adhere to a vegetarian diet. This bar would be shorter compared to the mixed diet bar but taller than the non-vegetarian bar. Overall, the graph visually represents the distribution of dietary preferences among pupils.

FRUITS AND VEGETABLES

	DAILY	NEVER	1T/W	2T/W	3T/W	4T/W	5T/W	6T/W	1T/M	2T/M
Dry fruits	7(5.4)	28(21.5)	48(36.9)	19(14.6)	22(16.9)	1(0.8)	1(0.8)	1(0.8)	1(0.8)	3(2.3)
Fresh fruits	65(50)	2(1.5)	29(22.3)	13(10)	10(7.7)	5(3.8)	3(2.3)	3(2.3)	1(0.8)	2(1.5)
Fresh fruit juices	38(29.2)	7(5.4)	40(30.8)	16(12.3)	14(10.8)	3(2.3)	1(0.8)	-	7(5.4)	4(3.1)
Green leafy vegetables	49(37.7)	3(2.3%)	36(27.7)	11(8.5)	23(17.7)	5(3.8)	3(2.3)	-	-	-
Cooked vegetables	75(57.7)	3(2.3)	18(13.8)	10(7.7)	18(13.8)	5(3.8)	1(0.8)	-	-	-
Raw vegetables	27(20.8)	48(36.9)	33(25.4)	14(10.8)	4(3.1)	2(1.5)	2(1.5)	-	-	-

Table: 3 Frequency distribution of fruits and vegetables

Each cell in the table represents the number of individuals or households falling into specific consumption categories, such as Daily," "Never," various frequencies per week and month.
The first column lists different types of fruits and vegetables, such as dry fruits, fresh fruits, fresh fruit juices, green leafy vegetables, cooked vegetables, and raw vegetables.
The header row lists different consumption frequencies, ranging from "Daily" to "2T/M" (twice per month).
The numbers within each cell represent the count of individuals or households falling into each consumption frequency category for each type of fruit or vegetable.
7 individuals (5.4%) consume dry fruits daily.
28 individuals (21.5%) never consume dry fruits.
48 individuals (36.9%) consume dry fruits once per week.
This table provides valuable insights into the consumption patterns of different types of fruits and vegetables among the surveyed population.

MILK AND DIARY PRODUCTS

	DAILY	NEVER	1T/W	2T/W	3T/W	4T/W	5T/W	1T/M	2T/M
Milk	79(60.8)	13(10)	10(7.7)	10(7.7)	7(5.4)	9(6.9)	1(0.8)	1(0.8)	--
Milk shakes	12(9.2)	14(10.8)	46(35.4)	10(7.7)	5(3.8)	1(0.8)	-	39(30)	3(2.3)
Yogurt	69(53.1)	18(13.8)	16(12.3)	9(6.9)	8(6.2)	6(4.6)	-	-	-
Cheese	2(1.5%)	33(25.4)	22(6.9)	8(6.2)	1(0.8)	-	1(0.8)	57(43.8)	3(2.3)
Ice cream	17(13.1)	-	52(40)	23(17.7)	13(10)	2(1.5)	-	19(14.6)	2(2.3)

Table: 4 frequency distribution of milk and dairy products.

"MILK AND DIARY PRODUCTS". The table has columns labeled "DAILY", "NEVER", "1T/W", "2T/W", "3T/W", "4T/W", "5T/W", "6 T / W", "1T/M", and "2T/M".
The rows list shows various milk and dairy products including:
- Milk (in two rows, one measured in unspecified units, the other in "shakes")
- Yogurt
- Cheese
- Ice cream
The cells contain numeric values, presumably representing consumption amounts or frequencies for each product in the specified time periods (daily, weekly, monthly).

MEAT & MEAT PRODUCTS

	DAILY	NEVER	1T/W	2T/W	3T/W	4T/W	5T/W	1T/M	2T/M
Egg	50(38.5)	16(12.3)	31(23.8)	8(6.2)	14(10.8)	4(3.1)	4(3.1)	3(2.3)	-
Chicken	3(2.3)	17(13.1)	91(70)	12(9.2)	3(2.3)	-	-	4(3.1)	-
Fish	-	29(22.3)	59(45.4)	15(11.5)	1(0.8)	-	-	25(19.2)	1(0.8)
Mutton	-	36(27.7)	46(35.4)	9(6.9)	13(10)	-	-	21(16.2)	1(0.8)

Table: 5 frequency distribution of meat products.

"MEAT & MEAT PRODUCTS" with data on the consumption frequency of various meat products.
The rows list the following meat categories: Egg, chicken, fish, mutton.
The columns represent different consumption frequencies "DAILY", "NEVER", "1T/W", "2T/W", "3T/W", "4T/W", "5T/W", "6 T / W", "1T/M", and "2T/M".
The cells contain numbers with percentages. These represent the number and percentage of subjects consuming each meat product at the specified frequency.
Egg has the highest daily consumption at 50(38.5%).
Chicken, fish, and mutton have low daily consumption percentages
A significant percentage never consumes fish (29(22.3%)) or mutton (36(27.7%)).

Weekly consumption (1-3 times) is common for all meat types.

Monthly consumption (1-2 times) is also notable for fish, mutton, and chicken.

The data suggests egg is the most frequently consumed, while fish and mutton are less common in daily diets, with a higher proportion of subjects never consuming them or having them only monthly or weekly

HABIT OF HAVING JUNK FOOD.

	Daily	Never	1t/ wk	2t/ wk	3t/wk	4t/wk	5t/wk	6t/wk
Pizza/burger	-	33(25.4)	23(17.7)	10(7.7)	3(2.3)	1(0.8)	55(42.3)	5(3.8)
French fries	3(2.3)	26(20)	49(37.7)	11(8.5)	7(5.4)	31(23.8)	-	2(1.5)
Shawarma/pasta/noodles	1(0.8)	28(21.5)	31(23.8)	11(8.5)	4(3.1)	47(36.2)	-	7(5.4)
Samosa/pakora	3(2.3)	24(18.5)	40(30.8)	21(16.2)	15(11.5)	5(3.8)	-	2(1.5)
Golgappa/channa chat	1(0.8)	14(10.8)	43(33.1)	24(18.5)	24(18.5)	10(7.7)	1(0.8)	1(0.8)

Table : 6 frequency distribution of having junk food.

This table lists various junk food items (pizza/burger, french fries, shawarma/pasta/noodles, samosa/pakora, gol gappa/channa chat) and the frequency of consumption (daily to twice a month). The data suggests these junk foods are consumed mostly on a weekly basis (1-5 times per week), with few people having them daily.

SWEETS / CONFECTIONARY/ BEVERAGES

	DAILY	NEVER	1T/W	2T/W	3T/W	4T/W	5T/W	6T/W	1T/M	2T/M
Chocolates / candies	55(42.3)	5(3.8)	32(24.6)	14(0.8)	17(13.1)	4(3.1)	1(0.8)	2(1.5)	-	-
Tea /coffee	32(24.6)	46(35.5)	27(20.8)	14(10.8)	4(3.1)	2(1.5)	3(2.3)	-	-	-
Carbonated drinks	9(6.9)	21(16.2)	60(46.2)	22(16.9)	6(4.6)	4(3.1)	7(5.4)	9(6.9)	21(16.2)	60(46.2)
Non-carbonated drinks	5(3.8)	25(19.2)	52(40)	27(20.8)	9(6.9)	20(15.)	1(0.8)	-	-	-

Table : 7 Frequency distribution of sweets and beverages

The table shows consumption patterns for chocolate/candies, tea/coffee, carbonated drinks, and non-carbonated drinks. Chocolate/candies and tea/coffee have the highest daily consumption (55 and 5 respectively). Carbonated drink consumption is spread across various frequencies, while non-carbonated drinks are less often consumed daily.

Bread /cereal products

	DAILY	NEVER	1T/W	2T/W	3T/W	4T/W	5T/W	6T/W	1T/M	2T/M
Rice	130(79.2)	-	4(0.8)	10(7.7)	13(10)	-	-	-	2(1.5)	1(0.1)
Dal	94(49.2)	2(1.5)	38(29.2)	17(13.1)	9(13.1)	-	-	-	1(0.1)	2(1.5)
Chapati/naan/paratha	124(72.3)	2(1.5)	26(20)	1(0.1)	2(1.5)	-	-	-	2(1.5)	3(0.2)
Legumes/pulses/lentil	67(37.7)	16(13.5)	49(37.7)	18(13.8)	7(5.4)	-	-	-	1(0.1)	2(1.5)

Table : 8 frequency distribution of bread and cereal products.

This table covers rice, dal, chapati/naan/paratha, and legumes/pulses/lentils. Rice has the highest daily consumption at 130, followed by chapati/naan/paratha at 124 and dal at 94. Legumes/pulses/lentils are mostly consumed on a daily (67) or weekly (1-3 times) basis.

SCREENTIME

MOBILE USAGE EVERYDAY

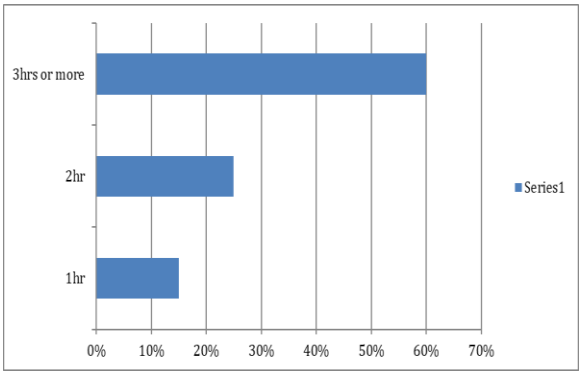

Figure : 8 frequency distribution of usage of mobile on daily bases.

The graph illustrates the screen time and mobile usage habits of children on a daily basis. The y-axis represents different categories of screen time durations, while the x-axis indicates the percentage of children falling into each category.

1 hour: Approximately 15% of children fall into this category, indicating a minority who have limited screen time.

More than 1 hour, up to 1.5 hours: About 40% of children watch screens for this duration, reflecting a moderate proportion with slightly extended screen time.

3 or more hours: The majority, around 60% of children, use mobile devices for three or more hours daily, indicating a significant portion with prolonged screen time habits.

This graph highlights the prevalence of prolonged mobile usage among children, underscoring the need for strategies to promote balanced screen time and mitigate potential negative impacts on health and development.

Check all you have had in the last month

Constipation	24%
Diarrhoea	3%
Nausea vomiting	8%
Dental problems	5%
Food allergy	9%
Difficulty in chewing or swallowing	12%
None	39%

Table : 9 frequency distribution of illness that has occurred last month.

This table explain about the subjects who were suffering with constipation are about 24% ,the subjects who are suffering with diarrhoea is about 3%, the number of subjects who were suffering with dental problems are about 5% , the number of subjects who has food allergies is about 9% , the number of subjects who has difficulty in chewing or swallowing is about 12% and subjects who has none of these are about 39%.

WEIGHT FOR AGE

WEIGHT FOR AGE	TOTAL NUMBER OF SUBJECTS	NORMAL	GRADE 1	GRADE 2	GRADE 3	GRADE 4
8	23	16	11	-	-	-
9	23	11	12	-	-	-
10	6	5	1	-	-	-
11	20	10	10	-	-	-
12	22	10	11	1	-	-
13	35	22	7	6	-	-
14	23	14	8	6	-	-
15	12	10	2	-	-	-

Table: 10 frequency distribution of weight for age.

The table provides information on the number of children in different age groups and their distribution across grade levels. For each age group, it shows the number of children and how many of them are classified as normal, Grade 1, Grade 2, Grade 3, and Grade 4.

Table : 11 frequency distribution of height for age.

Age of the pupil	WHO BMI Standards for Age	Underweight BMI for Age <5 percentile	Healthy weight for Age 5th - 85th percentile	Overweight BMI for age 85th - <95th percentile	Obese BMI for Age <95th percentile
7	13.3 – 19.3	-	10	-	-
8	13.4 – 20	-	5	-	-
9	13.6 – 20.9	-	36	-	-
10	14.2 – 23	6	30	-	-
11	14.2 – 21.9	4	10	4	2
12	14.6 – 24.1	-	10	4	-
13	15.1 – 25.2	-	10	3	-
14	15.6 – 26.3	-	9	2	1
15	16.2 – 27	-	10	3	1

"HEIGHT FOR AGE" which explains the normal height range for children of different ages.

The table has 5 columns: Height for Age - lists ages from 7 to 15 years old

2. Number of children - the sample size at each age

3. Normal - the normal height range in centimeters for that age

4. Mild, Moderate, Severe - these columns are empty, likely meant to show height ranges outside the normal range, indicating mild, moderate or severe deviations

The Normal height range increases with age. For example:

- At age 7, the normal height range is >95 cm for 9 children
- At age 15, the normal height range is 10 cm for 2 children

The data suggests height normally increases quite a bit each year from age 7 to 15. The sample sizes are fairly small, ranging from 2 to 35 children measured at each age.

The caption states "The above table explains height for age." but cuts off after that. More context would be needed to fully interpret the data and empty Mild, Moderate, Severe columns**.**

WHO CLASSIFICATION OF BMI FOR AGE OF SCHOOL CHILDREN

Height for Age	Number of children	Normal >95	Mild [90 – 95]	Moderate [85 – 90]	Severe <85
7	9	9	-	-	-
8	23	16	7	-	-
9	23	11	12	-	-
10	6	5	1	-	-
11	20	10	10	-	-
12	22	10	11	-	-
13	35	22	7	-	-
14	23	14	8	-	-
15	12	10	2	-	-

Table: 12 frequency distribution of classification of BMI for age of children.

The above table holds the information of WHO classification of BMI for age of school children, the age of the subject is from seven to fifteen years. In seven-year-old children there is no underweight child in whole class, most of the subjects have healthy weight about 10 percentiles of the pupils have healthy weight. There are no obese or overweight subjects. In eight-year-old children there is no one under the underweight category. About 5 percent of subjects have healthy weight and there are no overweight or obese subjects in 8-year-old children. The subjects have healthy weight about 36 percentiles of the pupils have healthy weight. There is no obese or overweight subjects. In nine-year-old children there is no one under the underweight category. There are 6% of subjects that fall under underweight. The subjects have healthy weight about 30% of the subjects have healthy weight. There are no obese or overweight subjects. In ten -year-old children there is no one under the underweight category. There are 4% of subjects that fall under underweight. The subjects have healthy weight about 10% of the subjects have healthy weight. There is 2% obese and 4% overweight subjects. In twelve-year-old children there is no one under the

underweight category. Healthy weight subjects are about 10% followed by overweight subjects which are 4% and there are no obese subjects. In thirteen-year-old There are no subjects that fall under underweight. The subjects have healthy weight about 10% of the subjects have healthy weight. There are no overweight subjects.

GRADE	FREQUENCY
Weight for Age (IAP) / (Gomez)	
Normal >90	98
Grade-1 (75-90%)	62
Grade-2 (60-75%)	13
Grade-3 (<60)	-
Height for Age (Waterlows)	
Normal (>95%)	107
Mild (90-95%)	58
Moderate (85%-90%)	-
Severe (<85%)	-
BMI PERECENTILE (According to WHO)	
Underweight	10
Healthy weight	130
Overweight	16
Obese	4

Table: 13 frequency distribution of BMI percentage.

The table explains about grade and frequency of the subjects in a comparative way. Subjects have been classified into four main categories underweight for age namely, Normal which shows above ninety. Subjects which come under Grade-1 are about 62 and subjects which fall under grade-3 are below sixty, there are so subjects that fall under grade-3. Height for age has been classified by using water-laws the subjects who fall under normal category are 107. The subjects who fall under mild are about 58. Whereas, the there is no one in moderate and severe frequency. BMI percentile is the percent of subjects who fall under underweight, healthy weight, overweight, obese. There are 10 subjects that fall under underweight. There are 130 subjects that fall under healthy weight, there are 16 subjects that fall under overweight and four subjects under the category of obese.

CONCLUSION

Based on the results of the present study it can be concluded that most of the students who participated in the study were boys of 9th class having an age of fourteen to fifteen years. Their mothers were housewives and belong to middle-class families. Most of the parents are employed in both private and government sector. Illiteracy rate is comparatively low. 20% of the students are from rural areas. 110(84.6) are from urban areas. 63(48.5%) children do not involve in any kind of physical exercise every day. 67(51.56%) of children participate in regular physical exercise. Out of 160 subjects, there are 10 subjects that fall under underweight. There are 130 subjects that fall under healthy weight, there are 16 subjects that fall under overweight and four subjects under the category of obese. Mostly students were taking their breakfast, lunch and dinner regularly. Many students were consuming rice, wheat, egg, milk, yogurt, dry fruits on a daily basis. Consumption of rice is higher about 130 indicating higher rate, the number of students who consume dal is also high about 94, the number of students who consume chapatti is high about 124. Chicken, cooked vegetables were one to two times per week. The screen time in children while consuming food is indirectly affecting the nutritional level in children. screen time usage among children varies significantly, with the majority (60%) spending three or more hours on mobile devices daily. About 25% of children allocate between one to 2 hours to screen time, while a smaller percentage (15%) limit their usage to less than one hour per day. These findings underscore the prevalence of prolonged screen time habits among children, raising concerns about potential impacts on health and development. Hormonal imbalances occur in children resulting in increase of thyroid in males and increased in higher puberty rate in both males and females. Girls hit puberty at early age. Addressing this issue requires a balanced approach that promotes healthy screen time habits while considering individual needs and factors influencing screen time usage.

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