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Research Article

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A Comparative Study of Nutritional Status, Mna, Nutrient Intake and Academic Performance of the Secondary School Children

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ABSTRACT

The present study aims to seek out the association between academic performances, nutritional status, nutrient intake of secondary school children in the Salem district of Tamil Nadu. The sample of the study consisted of 280 secondary school students under the age group of 13-17 years belonging to 12 different Government Residential Tribal schools in Salem district. Tools utilized in this study are assessment of height, weight, BMI, MNA scale and 24 hours recall method (nutrition intake) and academic performance. The collected data was analyzed statistically by employing mean, variance, t-test, and correlation. The nutritional status revealed that there was a significant difference between the mean weight of boys with high academic performance and girls with high academic performance of secondary school children. Regarding the MNA scales, there was insignificant between the groups and therefore the mean score intimates better improvement in girls. There were no significant differences between the boys and girls with low performance and high performance on nutrient content of energy, protein, fat, zinc (boys and girls with high performance), calcium, phosphorus, iron, sodium, vitamin A, Thiamin, niacin, vitamin C, Riboflavin (boys and girls with low performance) and folic acid. Regarding zinc content boys and girls with low performance, subjects showed a significant difference at a 1% level with mean scores of boys and girls 5.24 and 5.25 respectively. Regarding riboflavin content of boys and girls with high performance showed a significant difference at a 1% level with the same mean riboflavin scores of 0.95. Further, the correlation of the study variables showed a positive correlation between MNA with academic performance and weight at 0.01% level of significant difference and negative correlation was found in BMI with academic's performance. A positive correlation was observed between energy with protein, fat, zinc, phosphorus, iron, sodium, vitamin A, thiamine, niacin, riboflavin, and folic acid at 0.01% level of significance. Another positive correlation was found between energy with calcium at 0.05% level. Health promotion practitioners or teachers may utilize the findings from the study to the promoter within the school setting to support students to improve their dietary habits, to have potential impact on their academic performance.

Key words: Nutritional status, MNA scale, Academic performance, Secondary School Students

Introduction

Education has become the right of every child. Learning style differs from person to person. Some receive information better whereas others prefer an environment that has the least visual distraction. However, learning should be successfully. The students must become independent learners, which helps them to apply learned skills as well as to prepare themselves for the examinations. Learning becomes fruitful when students use what they have learned effectively and contextually. Students need to have appropriate independent study habits for mastering school subjects. Education is an indispensable instrument for the stability and progress of an individual as well as society.

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In education, effective learning not only depends upon good teaching but also on satisfactory learning procedure i.e. good study habits. Learning involves the development of proper study habits and skills and habits are not innate abilities like intelligence, but they are generally formulated, acquired, cultivated and fixed by repeated efforts. Nutrition is additionally an important component of human health, life, and brain development through the whole lifespan. Balanced nutrition is crucial for endurance, physical growth, cognitive development, and productivity. As well, malnutrition is considered a pressing problem that affects the ability of children to learn and causes them to perform at a lower level in school [1, 2, 3]. Under nutrition is a major public health challenging affecting academic school achievement. A person develops his attitude, skills, abilities, and competencies in all walks of life-related to him [4, 5]. Asiru stated that education plays a catalyst role in the development of individuals, society and of the Nation as a whole [6]. The education is an important tool for social growth and development for all sections of a society including its economy, social and political well-being [7]. The education plays a crucial role in human capacity buildings and skills acquisition [8]. Academic achievement indicates the ups and downs in the academic level of the student during the period of learning in schools and colleges. It can also be defined as total aggregate school examination marks converted into a percentage. Educational achievement refers to educational or Academic performance as a specified level of attainment or proficiency in academic work as evaluated by teachers by standardized tests or teacher-made tests or by a combination of both. Academic achievement of the students largely depends on the quality of education and quality come when the factors affecting the academic achievement of the students can be controlled and evaluated. A number of personal, psychological and social factors influence the academic achievement of the students such as Socio-economic Status, parental involvement, emotional maturity, intelligence, study habits, etc. The nutrition education of school children can bring about change in their dietary behaviour, which sometimes lasts for over 2 years [9].

Undernutrition is a chief public well-being challenge disturbing the academic achievement in school children[10]. There was a direct and positive influence on the academic performance of the children with improved nutritional status among them[11].

It is evident that nutrient intake is an important variable which has been explored by the researcher to analyze its relationship with the academic performance of secondary school children.

Thus, the present study was undertaken to compare the academic performance, nutritional status, nutrition intake, and mini nutritional assessment among the selected secondary school children.

Materials and Methods

The study was conducted in the Salem district of Tamil Nadu state. Twelve Government Tribal Welfare Scheduled Tribal population schools were selected in Salem district. A total number of 280 secondary school children under the age group of 13-17 years were included in this cross-sectional study.

Research Design

The present study was a comparative study. This scientific method in which comparative data is collected with a specific purpose, analyzed and specific conclusions were derived from the results. In this study, an assessment is made between the academic performance, nutritional status and nutrition intake of secondary school children.

Tools used

The questionnaire for an individual child was framed to get the details of academic performance, nutritional status, nutrition intake. The criteria assessed under each category are as follows:

Academic Performance

To assess the academic performance of the children, marks obtained in the last qualifying examination was considered as the index of academic achievements. The IX class (last qualifying examination in the academic year 2018-2019) marks of the subject's from the school register was collected. Based on the marks, students were further classified into low performers and high performers based on Mean $\pm\sigma$.

Nutritional status

Height

The subjects were asked to stand erect against a wall with heels to gather and toe apart without shoes. A mark was made with a scale rested flat on the head. The heights of all

the subjects were measured using a non-stretchable measuring tape.

Weight

The weighing balance was used to measure the bodyweight of all the selected subjects wearing light clothing, to the nearest 0.5kg.

BMI

Based on the height and weight measurements, the BMI of the individual subjects were measured using the standard formula.

Mini Nutritional Assessment (MNA) scale

The MNA is a validated nutrition screening and assessment tool that can identify malnourished or at risk of malnutrition in children. The current MNA retains the validity and accuracy of the original MNA in identifying who are malnourished or at risk of malnutrition. MNA scale was applied with the scores of 0-30.

Nutrient intake

The diet is a vital determinant of the health and nutritional status of people. Precise information on the food consumption pattern of people through the application of the appropriate methodology is often needed not only for assessing the nutritional status of people but also for elucidating the relationship of nutrient intake with deficiency as well as degenerative diseases. Detailed information on food consumption patterns was collected through the 24-hour recall method (3 consecutive days). Through this method, the following nutrients such as Energy, Protein, Fat, zinc, calcium, phosphorus, iron, sodium, vitamin A, thiamine, niacin, vitamin C, riboflavin and folic acid were calculated using NSI calculator.

Result and Discussion

The table-1 shows that the mean weight of boys with low performance was 35.24kg and the mean weight of girls with low performance was 33.90kg. The 't' test value (1.324) shows that there was no significant difference between the low performed boys and girls on the weight parameter. The mean weight of boys with high performance was 37.90kg and the mean weight of girls with high performance was 36.17kg. The 't' test value (2.232) shows that there was a significant difference at the 5% level between the high performed boys and girls on weight parameter. The children who are stunted have a low ability to learn at school and poor scholastic achievement. [2] stated that poor feeding practices are associated with stunted and impaired brain development [12].

Regarding the results on BMI, the mean BMI of boys with low performance was 25.47 and the girl's mean BMI was 25.08. The 't' test value (0.986) shows that there was no significant difference between the low performed boys and girls on the BMI parameter. The mean BMI of boys with high performance was 23.56 and the girl's mean BMI was 23.48. The 't' value (0.189) shows that there was no

Table 1. Comparison of low performance and High Performance of boys and girls on the variable of nutritional Status

Nutritional status	Academic performance of Boys and girls			
Weight in kg	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	35.24±5.170	33.90±4.380	37.90±6.211	36.17±4.381
T value	1.324^{NS}		2.232^{*}	
BMI(kg/m²)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	25.47±1.372	25.08±2.453	23.56±2.987	23.48±2.774
T value	0.986^{NS}		0.189^{NS}	
MNA Scale	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	18.153±0.122	17.904±2.434	25.08±1.172	25.15±1.011
T value	0.531^{NS}		0.407^{NS}	

*- Significant at 5% level, NS- Not significant

*- Significant at 5% level, NS- Not significant

significant difference between the high performed boys and girls on the BMI scale.

An analysis of Table -1 shows that the mean MNA scale of boys with low performance was 18.153 and the mean of girls was 17.904. The 't' test value (0.531) shows that there was no significant difference between the low performed boys and girls on the MNA scale. The mean MNA scale of boys and girls with high performance was 25.08 and the mean MNA of girls with high performance was 25.15. The 't' test value (0.407) shows that there was no significant difference between the high performed boys and girls on MNA scales. The researchers also observed that malnutrition was negatively and significantly related to academic performance. Several factors play a significant role in determining a child's educational outcomes, a child's health and nutritional status are some of the potential factors that can influence educational achievement. Hence children should be encouraged to adopt a healthy lifestyle and dietary practices to maintain a healthy weight status as this will help them to perform better in school [13].

Table 2. Comparison of mean nutrient intake among the selected low and high-performance boys and girls

Nutrients	**Academic performance of Boys and girls**			
Energy	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	151.30±254.01	152.58±283.70	173.06±129.96	152.28±304.12
T value	-0.230^{NS}			1.58^{NS}
Protein (g)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard	48.43±9.65	49.01±9.818	49.75±10.22	48.83±10.84
T value	-0.283^{NS}			0.589^{NS}
Fat (g)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	31.617±10.24	32.022±12.56	33.11±10.17	32.68±12.87
T value	-0.171^{NS}			0.244^{NS}
Zinc (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	5.24±1.272	5.25±1.31	5.81±2.927	5.30±1.495
T value	-0.021**			1.56^{NS}
Calcium (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	458.27±178.80	440.73±126.12	447.64±145.44	454.64±154.02
T value	0.532^{NS}			-0.31^{NS}
Phosphorus (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	125.30±268.40	126.63±211.52	140.94±661.07	129.83±407.76
T value	-0.25^{NS}			1.413^{NS}
Iron(mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	13.24±7.7855	14.25±8.1369	13.16±4.68	13.24±5.69
T value	-0.609^{NS}			-0.09^{NS}

(Table Continued)

(Table Continued)

Nutrients	**Academic performance of Boys and girls**			
Sodium (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	151.012±56.11	149.64±60.56	154.69±53.50	154.61±62.83
T value	0.11 ^{NS}			0.09 ^{NS}
Vitamin A (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	27.44±120.76	31.49±135.07	27.47±133.57	30.96±144.55
T value	-1.524 ^{NS}			-1.415 ^{NS}
Thiamin (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	1.31±0.22	1.32±0.238	1.38±0.24	1.34±.269
T value	-0.261 ^{NS}			1.08^{NS}
Niacin (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	14.54±3.74	14.63±3.191	16.61±7.856	14.74±5.128
T value	-0.124 ^{NS}			1.96 ^{NS}
Vitamin C(mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	46.70±27.503	50.04±30.05	66.18±188.21	51.81±40.63
T value	-0.557 ^{NS}			0.76 ^{NS}
Riboflavin(mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	0.92±0.182	0.94±.1934	0.95±0.156	0.95±0.211
T value	-0.586 ^{NS}			- 0.039**
Folic acid (mg)	Boys with low performance	Girls with low performance	Boys with high performance	Girls with high performance
Mean ± Standard Deviation	125.95±36.76	137.80±68.37	134.51±78.84	131.59±46.46
T value	-1.070 ^{NS}			0.317 ^{NS}

*- Significant at 5% level, NS- Not significant

The Table-2 shows that the mean energy content of boys with low performance was 151.30kcal and the mean energy of girls with low performance was 152.58kcal. The 't' test value (0.230) shows that there was no significant difference between the low performed boys and girls on the energy content. The mean Energy content of boys with high performance was 173.06kacal and the mean energy content of girls with high performance was 152.28kcal. The't' test value (1.58) shows that there was no significant between the high performed boys and girls on the energy content. Regarding the results on protein content, the mean protein content of boys with low performance was 48.43g and the girl's mean protein was 49.01g. The't' test value (0.283) shows that there was no significant difference between the low performed boys and girls on protein content. The mean protein content of boys with high performance was 49.75g and the girl's mean protein content was 48.83g. The 't' test value (0.589) shows that there was no significant difference between the high performed boys and girls on protein content.

The mean fat content of boys with low performance was 31.61g and the mean fat content of girls with low per-

formance was 30.022. The 't' test value (0.171) shows that there was no significant difference between the low performed boys and girls on fat content. The mean fat content of boys with high performance was 33.11 and the mean fat content of girls with high performance was 32.68. The 't' test value (0.244) shows that there was no significant between the high performed boys and girls on fat content. Regarding the results on zinc content, the mean zinc content of boys with low performance was 5.24mg and the girl's mean zinc content was 5.25mg. The 't' test value (0.021) shows that there was a significant difference between the low performed boys and girls on zinc content. The mean zinc content of boys with high performance were 5.81mg and the girl's mean zinc content was 5.30mg. The 't' test value (1.56) shows that there was no significant difference between the high performed boys and girls on zinc content.

The mean calcium content of boys with low performance was 458.27mg and the mean calcium content of girls with low performance was 440.73mg. The 't' test value (0.532) shows that there was no significant difference between the low performed boys and girls on calcium content. The mean calcium content of boys with high performance was 447.67mg and the mean calcium content of girls with high performance was 454.64mg. The 't' test value (0.31) shows that there was no significant between the high performed boys and girls on the calcium content. Regarding the results on phosphorus, the mean phosphorus of boys with low performance was 125.30mg and the girl's mean phosphorus was 126.63mg. The 't' test value (0.25) shows that there was no significant difference between the low performed boys and girls on phosphorus content. The mean phosphorus of boys with high performance was 140.94mg and the girls mean phosphorus was 129.83mg. The 't' test value (1.413) shows that there was no significant difference between the high performed boys and girls on phosphorus.

The mean iron content of boys with low performance was 13.24mg and the mean iron content of girls with low performance was 14.25mg. The 't' test value (0.609) shows that there was no significant difference between the low performed boys and girls on iron content. The mean iron content of boys with high performance was 13.16mg and the mean iron content of girls with high performance was 13.24mg. The 't' test value (0.09) shows that there was no significant difference between the high performed boys and girls on iron content. Regarding the results on the sodium content, the mean sodium of boys with low performance was 151.01mg and the girl's mean sodium was 149.64mg. The 't' test value (0.11) shows that there was no significant difference between the low performed boys and girls on sodium content. The mean sodium content of boys with high performance was 154.69mg and the girl's mean sodium was 154.61mg. The 't' test value (0.09) shows that there was no significant difference between the high performed boys and girls on the sodium content.

The mean vitamin A of boys with low performance was 27.44mg and the mean vitamin A of girls with low performance was 31.49mg. The 't' test value (1.524) shows that there was no significant difference between the low performed boys and girls on vitamin A content. The mean vitamin A of boys with high performance was 27.47mg and the mean vitamin A of girls with high performance was 30.96mg. The 't' test value (1.415) shows that there was no significant difference between the high performed boys and girls on vitamin A content. Regarding the results on thiamin content, the mean thiamin content of boys with low performance were1.31 and the girl's mean thiamin content was 1.32. The 't' test value (0.261) shows that there was no significant difference between the low performed boys and girls on thiamin content. The mean thiamin of boys with high performance were 1.38mg and the girl's mean thiamin were 1.34mg. The 't' test value (1.08) shows that there was no significant difference between the high performed boys and girls on thiamin content.

The mean niacin content of boys with low performance was 14.54mg and the mean niacin content of girls with low performance was 14.63mg. The 't' test value (0.124) shows that there was no significant difference between the low performed boys and girls on niacin content. The mean niacin content of boys with high performance was 16.61mgmg and the mean niacin content of girls with high performance was 14.63mg. The 't' test value (0.124) shows that there was no significant difference between the high performed boys and girls on niacin content. Regarding the results on the vitamin C content, the mean vitamin C of boys with low performance was 46.07mg and the girl's mean vitamin C was 50.04mg. The 't' test value (0.557) shows that there was no significant difference between the low performed boys and girls on vitamin C content. The mean vitamin C content of boys with high performance was 66.18mg and the girl's mean vitamin C was 51.81mg. The 't' test value (0.76) shows that there was no significant difference between the high performed boys and girls on vitamin C content.

The mean riboflavin of boys with low performance was 0.92mg and the mean riboflavin of girls with low performance was 0.94mg. The 't' test value (0.586) shows that there was no significant difference between the low performed boys and girls on riboflavin content. The mean riboflavin of boys with high performance was 0.95mg and the mean riboflavin of girls with high performance was 0.95mg. The 't' test value (0.039) shows that there was a

significant difference at 1% level between the high performed boys and girls on riboflavin content.

Regarding the results on folic acid content, the mean folic acid content of boys with low performance were125.95mg and the girl's mean folic acid content was 137.80mg. The 't' test value (1.07) shows that there was no significant difference between the low performed boys and girls on folic acid content. The mean folic acid of boys with high performance were 134.51mg and the girl's mean folic acid were 131.59mg. The 't' test value (0.317) shows that there was no significant difference between the high performed boys and girls on folic acid content.

The dietary habits are also associated with school performance. For example, fast foods affect academic performance[14]. The insufficient nutrient intakes, particularly of iron, and high intakes fat and added sugar due to frequent fast food meal consumption are known to be associated with poor school performance and metabolic diseases, such as insulin resistance and obesity in other studies of children[14,15,16].

In other population groups, such as children and adolescents, it has been demonstrated that dietary intake does influence academic achievement [17,18,19]. Mostly, existing studies have focused on breakfast consumption, with evidence showing that more frequent consumption, and higher nutritional quality of breakfast, are positively associated with academic achievement [19]. A recent systematic review in school-aged students (age range 5–18 years) assessed a broader range of dietary components and behaviors with measures of academic achievement [17]. The previous review found regular breakfast consumption, higher consumption of fruit, vegetables, and certain micronutrients, including folate and iron, and lower consumption of junk foods were all associated with higher academic achievement [18].

A study in 2013 also found that the omega-3 fatty acid, docosahexaenoic acid, affected behaviour, memory and brain activity because of its effect on brain development [20]. In addition, studies have shown that the lack of an adequate supply of nutrients and malnutrition impaired concentration and learning and was associated with poor academic performance [21, 22], and a study in Malaysia also reported that nutritional status and parents' education are factors that could improve academic performance of children [23]

Table 3. Correlation between academic performance, weight, BMI and MNA of secondary school children

Correlation	Weight	BMI	MNA	Academic Performance
Weight	1			
BMI	-0.098	1		
MNA	0.191**	-0.263**	1	
Academic Performance	0.059	-0.172**	0.574**	1

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2 tailed)

Table -3 shows the calculated value of correlation coefficient between academic performance, weight, BMI, and MNA score of secondary school children. A positive correlation was found between MNA scores with academic performance (0.574), MNA scores with weight (0.191) at 0.01% level of significant difference. The negative correlation was found between BMI with academic performance (0.172). The result of the study was also supported by the results of the studies of [24,25] found a positive relationship between academic achievement and MNA of secondary school children

Table -4 shows the calculated value of the correlation coefficient between academic performance and nutrient intake of secondary school children. A positive correlation was observed between energy with protein, fat, zinc, phosphorus, iron, sodium, vitamin A, thiamin, niacin, riboflavin, and folic acid at 0.01% level of significance. Another positive correlation was found between energy with calcium at 0.05% level. The majority of all the correlated variables were showed a positive correlation with each variable at a 0.01% level significant difference. A negative correlation was found between academic performances with protein and academic performances with iron content. About 5% level of significant difference was found between academic performances with vitamin C, Energy with calcium, phosphorus with iron, iron with vitamin A and vitamin C with riboflavin. A recent study experimentally proved that high saturated fat and refined carbohydrate diets induce impaired function in the frontal, limbic, and hippocampal systems, which perform learning, memory, and cognition functions. Moreover, in developing countries, macronutrient and micronutrient deficiencies are a devastating problem.[26]. Consequently, this obstacle has been either a direct or indirect influence on children's future of life [27]. Improved nutritional status has been exposed to have a positive and direct impact on the academic performance of children [28].

The dairy foods, including milk, were suggested to be beneficial to the neurocognitive functions of memory, vigilance, planning, and dichotic listening, probably due to better glucose tolerance in the brain and positive effects of bioactive peptides, colostrinin, proline-rich polypeptides, lactalbumin, vitamin B12, calcium, and probiotics [29].

Table 4. Correlation between the selected variables of academic performance and nutrient intake of secondary school children

Correlation Variables	Academic Performance	Energy	Protein	Fat	Zinc	Calcium	Phosphorus	Iron	Sodium	Vitamin A	Thiamin	Niacin	Vitamin C	Riboflavin	Folic acid
Academic Performance	1	-0.05	-0.128*	-0.035	-0.109	-.0046	-0.082	-0.135*	-0.006	-0.033	-0.111	-0.147*	0.126*	-0.011	-0.077
Energy (kcal)		1	0.406**	0.319**	0.270**	0.141*	0.215**	0.177**	0.283**	0.216**	0.418**	0.278**	0.042	0.322**	0.249**
Protein (g)			1	0.761**	0.564**	0.661**	0.494**	0.382**	0.710**	0.459**	0.898**	0.638**	0.050	0.784**	0.671**
Fat (g)				1	0.426**	0.533**	0.324**	0.315**	0.602**	0.201**	0.654**	0.537**	0.120*	0.662**	0.505**
Zinc (mg)					1	0.490**	0.304**	0.278**	0.396**	0.237**	0.610**	0.418**	-0.019	0.421**	0.386**
Calcium (mg)						1	0.420**	0.369**	0.742**	0.486**	0.586**	0.418**	0.101	0.753**	0.455**
Phosphorus (mg)							1	0.120*	0.401**	0.339**	0.422**	0.872**	0.004	0.412**	0.331**
Iron (mg)								1	0.230**	0.139*	0.378**	0.242**	-0.012	0.258**	0.213**
Sodium (mg)									1	0.514**	0.624**	0.373**	0.169**	0.878**	0.529**
Vitamin A (mg)										1	0.387**	0.230**	0.095	0.506**	0.407**
Thiamin (mg)											1	0.611**	0.053	0.718**	0.658**
Niacin (mg)												1	-0.027	0.419**	0.382**
Vitamin C (mg)													1	0.143*	0.057
Riboflavin (mg)														1	0.592**
Folic acid(mg)															1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Conclusion

The above discussions of the obtained results of the study cause subsequent conclusions. Weight measures showed a big difference in the academic performance of selected children. Teachers have a task in guiding students to know and develop in them the desirable academic performance, while parents have a responsibility in understanding the importance of excellent weight, height and BMI and monitor their children towards that. A synergy among school teachers, parents, and students would be ideal. The findings of the study explored that nutrient intake had a positive and significant influence on the academic performance of students. Good dietary habits seem to be an important determinant of academic performance of students. The findings may be helpful for the parents and teachers to understand the importance of the nutrients among students for their academic success. Therefore, the teachers and parents should identify good dietary habits and find ways and means of enhancing them among students. The basic goal of education is to create a successful individual in all phases of life and nothing can be achieved in life without good habits, regular efforts, and practices as it is rightly said that practice makes a man perfect. However, in order to achieve this very basic goal of education, educators and counselors are advised to treat the eating habits of the students first because congenial habits lay the foundation for success in life.

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